NAME INDEX

to Papers and Reviews

Abegg, A.	Dielectric behavior of ice. R.	521
"	Freezing-points of dilute solutions. R.	399
"	Rate of depolarization, and dielectric constants. R.	74
Abt, A.	Some resistances and specific heats. R.	60
Allen, F. B.	Vapor-tensions of concentrated hydrochloric acid solutions,	120
Ampola & Rimatori	Cryoscopic behavior of orthonitrophenol. R.	62
Andreoli, E.	Gold, zinc and electrolysis. R.	142
Appleyard, R.	Electrical formation of mercury films. R. 142,	518
Archibald, E. H.	Calculation of the conductivity of aqueous solutions. R	406
Arrhenius, S	The discharge of electricity from points. R.	343
Aubel, E. van	Relations between composition and properties of liquids. R.	138
Auwers, K.	Cryoscopic investigation of acid amids. R.	62
Bagard, H.	Hall's phenomenon in liquids. R.	513
Baker, H. B.	Drying of ammonia and hydrogen chlorid. R.	511
Bakunin, M.	Stereochemistry of phenylnitrocinnamic acids. R.	138
Ball, J.	Rate of solution of zinc in dilute acids, R.	343
Bancroft, W. D.	The equilibria of stereoisomers, I., II., 143,	245
"	Note on the transference number of hydrogen,	496
"	The variance of the voltaic cell,	427
Barnes & Scott	Solution densities,	536
Baur, E.	Some affinity constants and heats of dissociation. R.	69
Beckenkamp, J.	The electrical, chemical and geometrical properties of crystals. R.	346
Behn, U.	Reciprocal diffusion of electrolytes. R.	266
"	Theory of capillary electrometer. R.	66
Benndorf, H.	Extension of Maxwell's theory of gases. R.	138
Benoist & Hurmuzescu	Action of X-rays on electrified bodies. R.	208
Beveridge, P. J.	Molecules and liquefaction heats. R.	397
Bischoff & Foerster	Electrolysis of calcium chlorid solutions. R.	456
Boeseken, J.	Action of caustic alkali solutions on tartaric acid. R.	508
Bohr, C.	Absorption of gases by liquids. R.	400
Bois, H. du	Susceptibility of aqueous solutions. R.	514
Boltzmann, L.	Variations from the gas laws. R.	139
Bonomi da Monte & Zoso	The energy of some sulfonic acids. R.	406
Borchers, W.	A gas cell. R.	68
Böttger, W.	The electrometer as indicator in titration. R.	68
Braun, F.	Conducting surface-layers. R.	524
"	Evolution of light at electrodes. R.	518
"	Movements due to the electric current. R.	270
Bredig, G.	Conduction of heat and electricity, II. R.	73
Brooks, F. C. H.	The double iodid of lead and potassium. R.	402
Brown, O. W.	Distribution of mercuric chlorid between toluene and water,	51
Brühl, J. W.	Spectrochemistry of nitrogen. R.	522
Bruner, L.	Solubility of supercooled liquids. R.	61
Bruni, G.	Solid solutions of benzene in phenol. R.	506
"	Solid solutions among compounds with open chains. R.	507
"	Solid solutions of pyridin and piperidin in benzene. R.	507

Bryan, G. B.	Conductivity of liquids in thin layers. R.	519
Buchanan, J. Y.	Notation in calorimetry. R.	505
Buchböck, G.	Velocity of decomposition of carbonylsulfid. R.	203
Bucherer, A. H.	Magnetism and electromotive force. R.	69
"	Osmotic pressure. R.	403
Burnie, W. B.	Thermoelectric properties of liquid metals. R.	205, 513
Bunte, H.	The recent development of flame illumination. R.	408
Buxhoeden & Tammann	The hydrates of magnesium platinocyanid. R.	401
Cady, H. P.	A constant temperature device,	242
"	Electromotive force between amalgams,	551
"	Naphthalene and aqueous acetone,	168
Cameron, F. K.	Benzaldoxime,	409
"	The benzoyl ester of acethydroxamic acid,	376
Cameron & Holly	Acetonechloroform,	322
Camichel, C.	A thermal mercury ammeter. R.	73
"	A thermal mercury volt-meter. R.	68
Campbell, A.	Self-acting temperature compensation for standard cells. R.	512
Campetti, A.	Temperature and migration velocity. R.	141
Cantor, M.	Velocity of molecules. R.	58
Carnazzi, P.	Influence of pressure on the index of refraction of gases. R.	523
Carrara & Minozzi	On the color of the ions. R.	406
Carrara & Rossi	Catalysis of methyl acetate by salts. R.	403
"	Energy of bases with mixed properties. R.	142, 406
Carveth, H. R.	Acetaldoxime,	159
"	Single differences of potential,	289
"	Study of a three-component system,	209
Case, W. E.	New gas batteries and a new carbon battery. R.	404
Cattaneo, C.	Temperature coefficients of conductivity of salts in alcohol and ether. R.	71
Centnerzwer, M.	Catalytic action of gases on the oxidation of phosphorus. R.	523
Charpy, G.	The constitution of eutectic alloys. R.	401
Le Chatelier, H.	The dissociation of minium. R.	200
Chiavassa, F.	Hall's phenomenon in liquids. R.	404
Chree, C.	Notes on thermometry. R.	504
Coehn, A.	Electrical transference of colloids. R.	69
"	Electrostenolysis. R.	517
"	Law governing the generation of electricity. R.	520
Cohen, E.	Dissociation of substances dissolved in aqueous alcohol. R.	454
Cottrell, F. G.	On heat of solution of liquid hydriodic acid,	492
Des Coudres, T.	Lenard rays. R.	75
Crompton, H.	Heats of neutralization in dilute aqueous solution. R.	63
"	Influence of molecular association on freezing-point and osmotic pressure. R.	399
"	Molecular rotations of salts. R.	74
"	Osmotic pressure and electrolytic dissociation. R.	140
Curtis, C. B.	Analysis of aqueous alcohol,	371
Dahms, A.	Heat of separation in solutions. R.	449
Danneel, H.	Measurement of metal precipitated electrolytically. R.	71
Day, W. S.	Rowland's mechanical equivalent of heat. R.	504
Debus, H.	Genesis of Dalton's atomic theory, II. R.	58
Deerr, N.	Molecules and liquefaction heats. R.	398
"	Thermal constants of the elements. R.	397
Dewar, J.	Liquefaction of hydrogen and helium. R.	505

Dickson, J. D. H.	Platinum temperatures. R.	519
"	Reduction to normal air temperatures of the platinum temperatures of Dewar and Fleming. R.	519
Dieterici, C.	Vapor-tensions of dilute aqueous solutions. R.	262
Dijken, D.	Refraction and dispersion of salt solutions. R.	74
Dodge & Graton	Alcohol, water and potassium nitrate,	498
Dolezalek, F.	Electromotive force of the lead accumulator. R.	453
Donnan, F. G.	The isothermal pressure-surface in the case of two single salts and one double salt,	417
"	Thomson effect in a binary electrolyte. R.	513
Dorsey, N. E.	Surface-tension of water and of solutions. R.	272, 524
Drude, P.	The optical constants of sodium. R.	345
"	Theory of anomalous electric dispersion. R.	346
Duane, W.	On electrolytic thermopiles. R.	512
Duhem, P.	On the general problem of chemical statics,	1, 91
"	Thermochimie. R.	395
Dühring, U.	Avogadro's law and the liquid state. R.	59
Eichenwald, A.	Absorption of electric waves in electrolysis. R.	271
Elbs, K.	Relation of electrochemistry to organic chemistry. R.	71
Elbs & Herz	Electrolytic preparation of iodoform. R.	71
Elster & Geitel	Photoelectric behavior of salts. R.	267
Emich, F.	Inflammability of thin layers of gases. R.	267
Emmens & Emmens	Migrant matter. R.	62
Erskine, J. A.	Conductivity of electrolytes for electric waves. R.	73
Euler, H.	The motivities of molecules. R.	266
Ewan, T.	Industrial application of electrochemistry. R.	518
Exner & Haschek	Ultraviolet spark spectra of the elements. R.	207
Federico, R.	A differential telephone for measuring resistance. R.	73
Fiske & Collins	Surface travel on electrolytes. R.	407
Florio, F.	Hall's phenomenon in liquids. R.	73
Fock, A.	Molecular weights of solids. R.	398
Foerster, F.	Electrolytic precipitation of nickel. R.	70
"	Electrolytic preparation of perchloric acid and its salts. R.	269
Foerster & Mewes	Electrolytic preparation of iodoform. R.	344
Foley, A. L.	Arc spectra. R.	207
Franck, L.	Formation of sulfids by mechanical influences. R.	402
Frankland & Patterson	Rotatory power of substituted glycerates and tartrates. R.	523
Frenzel, Fritz & Meyer	Evolution of oxygen on reduction. R.	342
Friedlander & Tammann	Rate of crystallization. R.	65
Gladstone & Hibbert	Molecular refraction of salts and acids. R.	345
" "	Permeability of elements to the Röntgen rays. R.	208
Glan, P.	Elastic bodies and light. R.	346
Glaser, L.	Electrolytic decomposition of aqueous solutions. R.	451
Gloss, S. D	The molecular weight of orthorhombic, monoclinic, and plastic sulphur in naphthalene and phosphorus, by the freezing-point method.	421
Gockel, A.	Remarks on a paper by T. W. Richards. R.	204
Goldhammer, D. A.	Retardation of electric vibrations. R.	75
Goldschmidt & Buss,	Dynamic investigation of formation of azo dyes, II. R.	342
Goldschmidt & Wachs	Formation of anilids. R.	65
Gordon, V.	Transference number of cadmium at different temperatures. R.	70

Gore, G.	Proximity of substances and volta-electricity. R.	513
Gouy, A.	Constant temperature bath. R.	137
Graetz, L.	Changing alternating into direct currents. R.	72
Gramont, A de	Dissociation spectra of melted salts. R.	207
"	The spark spectra of compounds. R.	207
Grimaldi & Platania	Polarization on capacity of very thin foil. R.	404
Groshans, J. A.	Volume of liquid and vapor at boiling-point. R.	138
Gross, T.	Decomposition of sulfur. R.	140
Grützner, P.	Electrolytic self-recording of currents. R.	142
Guglielmo, G.	Decreasing the harmful space in air thermometers. R.	395
"	The molecular velocity of liquids,	395, 504
"	A Sprengel pump. R.	396
Guichard, M.	Reduction of molybdic anhydrid. R.	64
Gutmann, S.	Non-combination of dry hydrogen chlorid and ammonia. R.	511
Haber, F.	Electrolytically precipitated iron. R.	517
Hall, V. J.	Zinc hydroxid in precipitation. R.	202
Hantzsch & Kaufmann	Study of hyponitrous acid. R.	62
Hardin, W. L.	Atomic mass of tungsten. R.	137
Hauke, A.	The refractive equivalents of the elements. R.	206
Heilpern, J.	Electrochemical introduction of hydroxyl into azobenzene. R.	72
Helbig, D.	A tubular electric furnace. R.	58
Hemptinne, A. de	Chemical action of electric waves, II. R.	75
"	Synthesis by the electric discharge. R.	402
Henriet, H.	New mercury pump. R.	58
Henry, L.	Volatility of fluorin compounds. R.	140
Herrmann, F.	The number of isomeric paraffins. R.	341
"	Reply. R.	397
Heydweiller, F.	Cohesion and surface-tension of gold. R.	346
"	Determination of capillary constants. R.	524
"	The inner friction of a solid. R.	408
Hillmayr, W.	Freezing-points of dilute sulfuric acid. R.	262
Hittorf, W.	Electromotive behavior of chromium. R.	450
van 't Hoff & Dawson	The racemic transformation of ammonium bimalate. R.	402
Hoitsema, C.	Aqueous solutions of salts with a common ion. R.	402
"	The equilibrium $CO + H_2O \rightleftharpoons CO_2 + H_2$. R.	450
Holleman, A. F.	Reciprocal transformation of tartaric, racemic and mesotartaric acids. R.	508
Hough, G. J.	Aluminum used as an electrode. R.	520
"	Electrolytic stand. R.	520
Jäger, G.	Theory of gases. R.	139
Jaeger, W.	Electromotive behavior of cadmium amalgams. R.	511
"	Transformation in the Clark element. R.	267
Jaeger & Kahle	The unit of electrical resistance at the Imperial Institute. R.	405
Jaeger & Lindeck	Constancy of normal resistances of manganin. R.	519
Jäger & Meyer	Magnetic susceptibility and atomic magnetism. R.	268
Jahn, H.	Association or dissociation. R.	399
"	Electrochemical notes. R.	205
Jones & King	Dissociation measured by boiling-point method. R.	141
Jones & Reese	Conductivity of praseodymium and neodymium sulphates. R.	520
Jorissen, W. P.	'Active' oxygen. R.	342

Jorissen, W. P.	Formation of peroxids by 'active' oxygen. R.	202
"	Generation of "active oxygen". R.	63
Judson & Walker	Reduction of bromic acid. R.	510
Kahle, K.	Remarks on a paper on the Clark cell. R.	204
Kahlenberg & Lincoln	Solutions of silicates of the alkalies,	77
Kastle, J. H.	Taste and affinity of acids. R.	518
Kastle & Beatty	Effect of light on combination of hydrogen and bromin. R.	204
Kauffmann, H.	Electrolytic reduction of aldehydes and ketones. R.	456
Kellas, A. M.	Rates of etherification and of saponification. R.	65
Kelvin, Lord	Method for measuring differences of vapor-pressures. R.	200
"	On osmotic pressure. R.	203
Kipping & Pope	Derivatives of camphoric acid, II. R.	60
" "	Optical inversion of camphor. R.	60
" "	Racemism and pseudoracemism. R.	141
Kirpal, A.	Hemipinic and paverinic acids. R.	271
Klein, R.	Depolarization of mercury and platinum electrodes. R.	67
Klobbie, E. A.	The systems ether-water and ether-water malonic acid. R.	265
Knüpffer, C.	Chemical equilibrium and electromotive force. R.	452
Koch, K. P.	Dielectric constant and refractive index in the magnetic field. R.	271
Kohlrausch, F.	Displacement of concentrations in electrolysis. R.	69
"	Electrolysis of the chlorids of platinum. R.	269
Kohlrausch, Holborn & Diesselhorst	New basis for determining the conductivities of electrolytes. R.	405
König, W.	Zeeman's phenomenon. R.	75
Krutwig, J.	The formation of sodium sulfate. R.	204
Kuenen, J. P.	Anomalies near the critical point. R.	199
"	Critical phenomena of mixtures. R.	200
"	Condensation and critical phenomena. R.	507
"	Condensation and critical phenomena of some substances and mixtures. R.	400
"	The two folds in the surface for mixtures. R.	201
Kümmell, G.	Transference numbers for zinc and cadmium salts. R.	516
Kuriloff, B.	Equilibria in solutions containing three components. R.	202
"	The mass law for β-naphtol, picric acid and benzene. R.	265
"	Organic addition-products, II. R.	61
"	Simultaneous application of the mass law and the phase rule. R.	449
Küster, F. W.	Ion-reactions in electrochemistry. R.	71
"	Relation of electrochemistry to organic chemistry. R.	71
"	Velocity of crystallization. R.	450
Küster & v. Steinwehr	Electroanalytic precipitation of silver from nitric acid solution. R.	452
Laar, J. J. van	The heat of dissociation of electrolysis. R.	344
Ladenburg, A.	Racemism. R.	402
Lampa, A.	Refractive indices for short electric waves. R.	207
Landsberger, W.	Determining molecular weights by the boiling-point method. R.	400
Lasczynski & Gorski	Conductivity of salts in pyridin. R.	206

Lehfeldt, R. A.	Properties of liquid mixtures. R.	507
Ley, H.	Hydrolytic dissociation. R.	342
Liebenow, C.	Capacity of accumulators with varying currents. R.	72
Linebarger, C. E.	Speed of coagulation. R.	511
"	Surface-tensions of aqueous solutions. R.	523
Litch, R. L.	Determining specific heats of liquids. R.	137
Liversidge, A.	Structure of gold and platinum. R.	75
Löb, W.	Electrolytic reduction of the nitro-group. R.	455
Long, J. H.	Speed of reduction of ferric alum. R.	203
Lorenz, R.	Electrode holder. R.	520
"	Electrolysis of sodium chlorid. R.	344
"	Galvanic "precipitation" cells. R.	267
Losanitsch, S. M.	Isomerism in the paraffins. R.	340
Löwenherz, R.	Determination of dissociation constants from increased solubility. R.	454
Luggin, H.	Electrocapillary phenomena. R.	267
"	Photoelectric phenomena. R.	404
Lummer & Pringsheim	The ratios of the specific heats of gases. R.	396
Lussana, S.	Electrical resistance of solutions as a function of pressure and temperature. R.	405
"	Specific heat of gases. R.	60
MacGregor & Archibald	Calculation of conductivity for two electrolytes with no common ion. R	519
McIlhiney, P. C.	Method for determining the resistance of electrolytes. R.	519
McIntosh, D.	Normal elements,	185
"	The transference number of hydrogen,	273
Magnanini & Malagnini	Thermal conductivity of nitrogen peroxid. R.	65, 398
Majorana, Q.	Reproduction of the diamond. R.	59
Mallet, J. W.	Solubility of ammonia in water. R.	140
Marangoni, C.	Density measurements with two areometers. R.	506
Margules, M.	Dissolving of platinum and gold in electrolytes. R.	516
Martini, T.	Heat effect on moistening powders. R.	76
Menschutkin, N.	On aliphatic chains. R.	342
"	Boiling-points of isomeric compounds. R.	341, 398
"	Influence of side chains on velocities of reaction. R.	342
Metzner, R.	Action of telluric chlorid and fluorid on acids. R.	64
Meyer, G.	Comment on diffusion constants. R.	510
Meyer, R.	Fluorescence and chemical constitution. R.	208, 408
Meyer, V.	Etherification of benzoic acids. R.	65
Meyer & Recklinghausen	Vapor-densities at extreme temperatures R.	341
Meyer & Saam	Rates of oxidation of gases by liquids. R.	343
Mihaly, R.	Rise of freezing-point in benzene. R.	63
Mijers, J.	Semipermeable walls. R.	509
Milani, G.	Magnetism and conductivity of solutions. R.	73
Miller, W. v.	Synthesis of organic acids. R	72
Miolati, A.	The primary carbonate of tetramincobaltocarbonate. R.	406
Miolati & Alvisi	The electrolytic behavior of fluo- and fluoxy-salts. R.	406
Moissan & Dewar	Liquefaction of fluorin. R.	396
Mond, Ramsay & Shields	Occlusion of hydrogen and oxygen by palladium. R.	400
Moretto, P.	Temperature of maximum density of solutions. R.	61
Mulder, E.	Peroxynitrate and peroxid of silver. R.	508
Mulder & Heringa	A peroxynitrate of silver. R.	142

Myers & Braun	Decomposition of silver salts by pressure. R.	404, 513
Nasini, R.	The molecular volumes of liquids. R.	59, 398
Naumann, A.	Boiling-points of isomeric compounds. R.	398
Nernst & Scott	Polarization at thin membranes. R.	205
Neumann, B.	Electrolytic separations. R.	269
Nicol, W. W. J.	On supersaturation. R.	401
Norris, J. F.	Double salts containing selenium. R.	508
Novak, V.	Conductivities and freezing-points of water in formic acid. R.	521
Noyes & Abbott	Osmotic pressure and vapor-pressure. R.	203
Noyes & Whitney	Rate of solution of solids. R.	65, 403
Noyes & Woodworth	Solubility effect in the case of tri-ionic salts. R.	450
Oberbeck, A.	The theory of galvanic polarization. R.	343
Ostwald, W.	Vapor pressures of mutually soluble liquids. R.	200
Palmaer, W.	Principle of the dropping electrode. R.	454
Pauli, H.	On nitrogurets. R.	72
Pawlewski, B.	Fluorescent compounds. R.	408
"	The theory of solutions. R.	341
Perman, Ramsay & Rose-Innes	The adiabatic relations of ethyl oxid. R.	199
Peters, R.	Oxidation and reduction cells. R.	454
Pfaundler, L.	Tension of mercury vapor. R.	260
Pfeiffer, G J.	Specific gravities of sulfur in carbon bisulfid. R.	398
Philip, J. C.	Dielectric properties of mixtures. R.	74
Platner, G.	On hydrolysis and catalysis. R.	402
Ponsot, A.	Osmotic measurements. R.	203
"	Recognizing a good cryoscopic method. R.	264
Pribram & Glücksmann	Contraction and rotation of optically active solutions, I, II. R.	272
Puggenheimer, S.	Actino-electric phenomena of the Röntgen rays. R.	208
Quincke, G.	The surface-tension of gold. R.	408
"	Viscosity in an electric field. R.	76
Ramsay & Travers	The refractivities of certain gases. R.	407
Randall, W. W.	Permeation of hot platinum by gases. R.	60
Rayleigh, Lord	Densities of CO, CO_2, and N_2O. R.	260
Revay, N.	Electrolytic separations. R.	268
Richards, T. W.	Rate of dehydration of crystallized salts. R.	403
"	Table of atomic weights. R.	504
"	The taste of acids and their degree of dissociation. R.	206
"	Temperature coefficients of calomel electrode. R.	68
Richards & Baxter	The atomic weight of cobalt. R.	396
Richards & Cushman	The atomic weight of nickel. R.	396
Richarz, F.	Electrolytic formation of persulfuric acid. R.	345
Richarz & Ziegler	Temperature at the surfaces of electrodes. R.	270
Richter, C.	Heat and cold regulator. R.	138
Rigollot, H.	Electrochemical actinometers. R.	205
Rizzo, G. B.	Spectroscopic studies of argon. R.	207
Rodewald, H.	The thermodynamics of gelatinization. R.	201
Rohland, P.	Electrolysis of salts of the fatty acids. R.	71
Roloff, M.	Light action. R.	522
Rose-Innes, J.	Isothermals of ether. R.	506
"	Isothermals of isopentane. R.	506
Rosenheim & Woge	The valency of beryllium. R.	400
Roth, W.	Absorption of nitrous oxid by solutions. R.	63
Rothmund, V.	Transition temperature of a solid solution. R.	263

Rubens & Ashkinass	Absorption and emission of water vapor and carbon dioxid. R.	407
Runge & Paschen	Spectra of oxygen, sulfur and selenium. R.	271
Salomon, E.	Theory of the residual current. R.	66
"	Titration with the galvanometer. R.	68
Salzer, T.	My theory of water of crystallization. R.	401
Sandrucci, A.	Density of liquids, and capillary action. R.	61
Sanford & Ray	Change of weight. R.	137
Saurel, P.	On integrating factors,	116
Schaum, K.	Crystallization of supercooled benzophenon. R.	448
"	Hylotropic-isomeric forms of matter. R.	397
Schiff & Monsacchi	Expansion of solutions of ammonia salts. R.	201
Schmidt, G. C.	Fluorescence and actino-electricity. R.	521
Schreber, K.	Dissociation of nitrogen peroxid. R.	261
Schreinemakers, F. A. H.	Equilibria in three-component systems. R.	62
"	The system water, sodium chlorid, succinonitrile. R.	264
"	Three components with two liquid phases. R.	264
Smith, E. P.	Electric current in organic chemistry. R.	518
Smits, A.	Experiments with the micromanometer. R.	200
Smoluchowski, M.	Conduction of heat in gases. R.	341
Snell, J. F.	Potassium chlorid and aqueous acetone,	457
Soch, C. A.	Benzilorthocarboxylic acid,	364
"	Fractional crystallization,	43
Sperber, J.	The heat of dissociation of iodin. R.	398
Speyers, C. L.	Molecular weights of some carbon compounds, R.	507
"	Molecular weights of liquids,	347, 362
"	Osmotic pressure. R.	510
Spiers, Twyman & Waters	Variations of Clark cells with temperatures, R.	511
Spring, W.	Coloring matters due to iron in sedimentary rocks. R.	509
"	The hydrolysis of ferric chlorid, R.	202, 402
Stackelberg, E. v.	Partition of current among ions. R.	70
Stansfield, A.	The Roberts-Austen recording pyrometer. R.	513
Starke, H.	Determination of dielectric constants. R.	74
Stortenbeker, W.	Electrolytic separation of cadmium and iron. R.	456
Sutherland, W.	The causes of osmotic pressure. R.	509
"	Heats of evaporation of zinc and cadmium. R.	506
Swarts, F.	The index of refraction of fluorin. R.	407
Tammann, G.	Limits of the solid state. R.	58
"	Vapor-tension of hydrates transparent on efflorescence. R.	262
"	Variation of the number of nuclei in supercooled liquids. R.	448
"	Velocity of crystallization. R.	450
Tchúgaeff, L.	Optical activity. R.	407
Teudt, H.	Experiments on air and certain gases between 350° and 500°. R.	448
Thayer, E. F.	Boiling-point curve for benzene and alcohol.	382
Thiesen, M.	The equation of state. R.	260
Thomsen, J.	The atomic weight of aluminum. R.	396
Thorpe, T. E.	Hydrates of isopropylic alcohol. R.	61
Threlfall & Martin	Oxygen at low pressures. R.	397
Tilden, W. A.	Specific heats of certain elements. R.	504
Tommasi, D.	Comment on note of R. Franchot. R.	206
"	Note on thermal equilibria in electrolysis,	229
"	Theory of the cell with carbon electrodes. R.	204
Townsend, J. S.	Application of diffusion to conducting gases. R.	515
"	Electrical properties of newly prepared gases. R.	514

Traube, J.	Molecular weights of solids. R.	398
"	Osmotic pressure and electrolytic dissociation. R.	399
"	Reply to H. Jahn. R.	399
Tutton, A. E.	Crystallographical character and atomic weight. R.	346
Vanni, G.	New form of capillary electrometer. R.	515
Veley & Manley	The electric conductivity of nitric acid. R.	406
Villard, P.	Solutions in gases. R.	141
Villari, E.	Action of the ozonizer on gases. R.	60
Visser, L. E. O. de	Freezing-points of mixtures of stearic and palmitic acids. R.	506
Volkmann, P.	Surface-tension of water. R.	76
Voller & Walter	Experiments with Röntgen rays. R.	75
Waddell, J.	Conversion of ammonium thiocyanate into thiourea and of thiourea into thiocyanate.	525
"	Benzene, acetic acid and water,	233
"	Indicators,	171
"	Permeability of elements to the Röntgen rays. R.	208
Wadsworth, F. L. O.	Determination of specific heats. R.	340
Waidner & Mallory	Comparison of Rowland's mercury thermometers with a Griffiths platinum thermometer. R.	504
Waitz, K.	The electric and the magnetic vibrations in Hertz's waves. R.	271
Walden, P.	Increasing the angle of rotation. R.	345
Walden & Lutz	Transformation of optical antipodes, II. R.	345
Walker & Lumsden	Determination of molecular weights. R.	507
Waller, A.	Electrolytic separations. R.	268
Watson, W.	Instrument for the comparison of thermometers. R.	505
Wegscheider, R.	On esterification. R.	266
"	Exchange of bromin for chlorin. R.	265
Werner, A.	Constitution of inorganic compounds. R.	399
Whetham, W. C. D.	Ionizing power of solvents. R.	521
Wildermann, M.	On real and apparent freezing-points. R.	507
Wilson, H. A.	Influence of dissolved substances and of electrification on the re-formation of clouds. R.	514
Winteler, F.	The active state of gases prepared by electrolysis. R.	270
"	On metallic precipitates. R.	342
Wirkner, C. G. von	Compression and liquefaction of gases. R.	140
Wohlwill, E.	Electrolytic precipitation of gold. R.	516
Young, S. W.	Solubility of stannous iodid. R.	202
Zaitschek, A.	Equilibrium between ethyl alcohol and sulfuric acid. R.	64
Zunino, V.	Action of potash on epichlorhydrin. R.	403

NAME INDEX

to New Books

Allen, A. H.	Commercial Organic Analysis,	566
Annuaire du Bureau des Longitudes,		136
Berthelot, M.	Thermochimie,	387
Boltzmann, L.	Vorlesungen ueber die Principe der Mechanik,	53
Bourgougnon, A.	Physical Problems and their Solutions,	134
Brannt, W. T.	Metallic Alloys,	57
Burch, G. J.	The Capillary Electrometer in Theory and Practice, Part I,	131
Christiansen, C.	Elements of Theoretical Physics,	55
Classen, A.	Qualitative Chemical Analysis by Electrolysis,	338
Dolbear, A. E.	Modes of Motion,	133
Duhem, P.	Traité élementaire de Mécanique chimique,	128
Engelmann, Th. W.	Tafeln und Tabellen zur Darstellung der Ergebnisse spektroskopischer und spectrophotometrischer Beobachtungen,	131
Fortschritte der Physik in 1896,		56, 391
Fresenius, C. R.	Manual of Qualitative Chemical Analysis,	54
Gore, G.	Electrochemistry, Inorganic,	131
Gray, A.	A Treatise on Magnetism and Electricity,	389
Haber, F.	Experimental Untersuchungen über Zersetzung und Verbrennung von Kohlenwasserstoffen,	339
Hall, W. S.	Elements of the Differential and Integral Calculus,	135
Hanssen, C. J. T.	Reform of Chemical and Physical Calculation,	502
Helm, G.	Die Energetik,	386, 441
Hessel, J. F. C.	Krystallometrie,	128
Hoff, J. H. van 't	The Arrangement of Atoms in Space,	258, 393
"	Leçons de Chimie physique,	565
"	Vorlesungen über theoretische und physikalische Chemie,	256
Januschke, H.	Das Princip der Erhaltung der Energie,	385
Jones, H. C.	The Freezing-point, Boiling-point, and Conductivity Methods,	196
Kahlbaum, G. W. A.	Editor Monographieen aus der Geschichte der Chemie,	391
Kaiserling, C.	Praktikum der wissenschaftlichen Photographie,	502
Kolbe, H.	Ueber den natürlichen Zusammenhang der organischen mit den unorganischen Verbindungen,	198
Küster, F. W.	Die Bedeutung der physikalischen Chemie,	394
Ladd, E. F.	A Manual of Quantitative Chemical Analysis,	394
Landauer, J.	Spectrum Analysis,	337
Landolt, H.	Das optische Drehungsvermögen,	196
Lorenz, H.	Neuere Kühlmaschinen,	198
Louguinine, W.	Beschreibung der Hauptmethoden welche bei der Bestimmung der Verbrennungswärme üblich sind,	446
Lüpke, R.	Elements of Electrochemistry,	56
Lupton, S.	Notes on Observations,	445
Mach, E.	Die Mechanik in Ihrer Entwickelung,	131
"	Popular Scientific Lectures,	392
Mendeléeff, D.	The Principles of Chemistry,	336
Minet, A.	Électrochimie,	197

Minet, A.	Les Fours électriques et leurs Applications,	57
"	Theories de l'Électrolyse, - - -	338
Murray, D. A.	An Elementary Course in Integral Calculus, -	388
Neumann, B.	The Theory and Practice of Electrolytic Methods of Analysis, - - - - - -	447
Newth, J. S.	A Manual of Chemical Analysis, - -	565
Noyes & Mulliken	Laboratory Experiments on the Class Reactions and Identification of Organic Substances, -	198
Oettel, F.	Introduction to Electrochemical Experiments,	389
"	Practical Exercises in Electrochemistry, -	390
Ostwald, W.	Arbeiten des physikalisch-chemischen Instituts der Universität Leipzig, - - - -	194
"	Lehrbuch der allgemeinen Chemie, -	443
"	Die wissenschaftlichen Grundlagen der analytischen Chemie, - - - - -	194
Page, J. M.	Ordinary Differential Equations, with an Introduction to Lie's Theory of the Group of One Parameter, - - - - -	258
Pellat, H.	Thermodynamique, - - - - -	390
Peters, F.	Angewandte Elektrochemie, - - 197,	502
Picou, R. V.	Canalisations électriques, Lignes aériennes industrielles, - - - - - -	502
Reeve, S. A.	The Entropy-temperature Analysis of Steam-engine Efficiencies, - - - - -	135
Remsen, I.	The Principles of Theoretical Chemistry, -	388
Reychler, A.	Les Théories physico-chimiques, - -	195
Roberts-Austen, W. C.	Canada's Metals, - - - - -	447
Schützenberger, P.	Leçons de Chimie générale, - - -	257
Science Abstracts,	- - - - - - - - -	390
Sidersky, D.	Les Constantes physico-chimiques, - -	57
Speyers, C. L.	Text-book of Physical Chemistry, - -	125
Thompson, S. P.	Light, Visible and Invisible, - - -	393
Threlfall, R.	On Laboratory Arts, - - - -	444
Tommasi, D.	Traité théorique et pratique d'Electrochimie, -	197
Traube, J.	Physico-Chemical Methods, - - -	565
Treadwell, A.	The Storage Battery, - - - -	446
Walke, W.	Lectures on Explosives, - - -	566
Wüllner, A.	Lehrbuch der Experimentalphysik, - -	134

SUBJECT INDEX

Exclusive of New Books

Absorption of electric waves in electrolytes, R. - - - - 271
— and emission of water and carbon dioxid, R. - - 407
— of gases and liquids at various temperatures, R. - - - 400
— of nitrous oxid by aqueous solutions, R. - - - 63
Accumulator, lead, capacity with varying currents, R. - - - 72
— lead, electromotive force and efficiency, R. - - - 453
Acetaldoxime, Hector R. Carveth, - - - - - 159
Acetate, methyl, catalysis by salts with mixed properties, R. - - 403
Acethydroxamic acid, the benzoyl ester of, Frank K. Cameron, - 276
Acetic acid, benzene and water, John Waddell, - - - - 233
Acetone, aqueous, and naphthalene, Hamilton P. Cady, - - 168
— aqueous, and potassium chlorid, J. F. Snell, - - - 457
Acetonechloroform, Frank K. Cameron and H. A. Holly, - - 322
Acetyl-peroxids, formation by active oxygen, R. - - - - 202
Acid, hydriodic, heat of solution, F. G. Cottrell, - - - 492
Acids and bases, heats of neutralization, R. - - - - - 63
— dissolved, molecular refraction of, R. - - - - 345
— taste and affinity of, R. - - - - - - 518
— taste and dissociation, R. - - - - - - 206
Actino-electric phenomena and the Röntgen rays, R. - - - 208
Actino-electricity and fluorescence, R. - - - - - 521
Actinometers, electrochemical, R. - - - - - - 205
Action, catalytic of vapors and gases on the oxidation of phosphorus, R. 523
— of light, R. - - - - - - - - - 522
Active oxygen, R. - - - - - - - - - 342
— formation of peroxids, R. - - - - - - 202
— from oxidation of sodium sulfite, R. - - - - - 63
Active state of electrolytic gases, R. - - - - - 270
Activity, optical, R. - - - - - - - - 407
Adiabatic relations of ethyl oxid, R. - - - - - - 199
Affinity constants for nitrogen acids, R. - - - - 69
— and taste of acids, R. - - - - - - 518
Air and chemically prepared gases at temperatures 350°–500° under atmospheric pressure, R. - - - - - - - 448
Air thermometer, harmful space in, R. - - - - - 395
Alcohol, aqueous, analysis of, Chester R. Curtis, - - - 371
— aqueous, dissociation in, R. - - - - - 454
— and benzene, boiling-point curve, E. F. Thayer, - - 382
— and ether, temperature coefficient of salt solutions, R. - - 77
— water and potassium nitrate, Norman Dodge and L. C. Graton, 498
Alcohols, potash on epichlorhydrins in presence of, R. - - - 403
Aldehydes and ketones, electrolytic reduction of, R. - - - 456
Aliphatic carbon chain, R. - - - - - - - 342
— compounds, isomeric, boiling-points of, R. - - - 398
— compounds, isomeric, regularities in boiling-point, R. - - 341
Alkali, caustic, solutions on tartaric acid, R. - - - - 508
Alkalies, solutions of silicates, L. Kahlenberg and A. T. Lincoln, - - 77
Alloys, eutectic, constitution of, R. - - - - - 401
Alternating and direct currents by electrochemical process, R. - - 72
Alum, ferric, speed of reduction by sugar, R. - - - - 203
Aluminum, atomic weight of, R. - - - - - - 396
— as an electrode, R. - - - - - - - 520

Amalgams of cadmium, electromotive behavior, R. - - - 511
— electromotive forces between, H. P. Cady. - - - 551
Amids, acid, cryoscopic behavior of, R. - - - - - - 62
Ammeter, thermal mercury, R. - - - - - - - 73
Ammonia and hydrogen chlorid, dry, Baker's research on, R. - - 511
— drying of, R. - - - - - - - - 511
— salts, expansion of solutions, R. - - - - - 201
— solubility in water below 0°, R. - - - - 140
Ammonium bimalate, racemic transformation of, R. - - - 402
— chlorid, dry, Baker's research on vapor density of, R, - 511
— thiocyanate, conversion into thiourea, J. Waddell, - - 525
Analysis of aqueous alcohol, Chester B. Curtis, - - - 371
Angle of rotation, a new means of increasing, R. - - - - 345
Anilids, formation of, R. - - - - - - - 65
Anomalies near the critical point, R. - - - - - - 199
Anomalous electric dispersion, R, - - - - - - 346
Antimony and tin, electrolytic separation, R. - - - - 268
Antipodes, optical, reciprocal transformation of, R. - - - 345
Apparatus for self-acting temperature, compensation of standard cells, R. 512
Apparent and real freezing-points, and freezing-point methods, R. - 507
Applications, industrial, of electrochemistry, R. - - - 518
Approximation, and Maxwell's theory of gases, R. - - - - 138
Aqueous acetone and potassium chlorid, J. F. Snell, - - - 457
— alcohol, analysis of, Chester B. Curtis, - - - - 371
— alcohol, dissociation in, R. - - - - - 454
— solutions, dilute, surface-tension by method of ripples, R. - 272, 524
— solutions of salts with a common ion, R. - - - 402
Aqueous solutions, vapor tensions of, R. - - - - 262
— and water, susceptibility of, R. - - - - - 514
Arc spectra, R. - - - - - - - - 207
Areometer, researches on density and capillarity, R. - - - 61
Areometers, density measurements with two, R. - - - 506
Argon, spectroscopic studies of, R. - - - - - - 207
Aromatic compounds, exchange of bromin and chlorin in, R. - 265
Arsenic from copper, electrolytic, separation of, R. - - - - 268
Association or dissociation, R. - - - - - - - 399
— molecular, lowering of freezing-point, osmotic pressure, R. - 399
Atmospheric air and chemically prepared gases at temperatures between 350° and 500° under atmospheric pressure, R. - - 448
— pressures, air and chemically prepared gases at 350° and 500° under, R. - - - - - - - - 448
Atomic index of refraction of fluorin, R. - - - - - 407
— magnetism and magnetic susceptibility, R. - - - 268
— mass of tungsten, R. - - - - - - - 137
— theory, genesis of, - - - - - - - - - 58
Atomic weight of aluminum, R. - - - - - - - - 396
— of cobalt, R. - - - - - - - - - 396
— of contained metals and crystallographic character of salts, R. 346
— of nickel, R. - - - - - - - - - 396
Atomic weights, table of, R. - - - - - - - 504
Avogadro's law and the liquid state, R. - - - - - - 59
Azobenzene, electrochemical introduction of hydroxyl into, R. - 72
Azo dyes, dynamic investigations of, R. - - - - - 342

Baker on dry hydrogen chlorid and ammonia, vapor density of dry ammonium chlorid, R. - - - - - - - - 511
Barnes and Callendar on the Clark cell, R. - - - - - 204
Bases and acids, heats of neutralization, R. - - - - - 64
— with mixed properties in catalysis of methyl acetate, R. - 403
— with mixed properties, energy of, R. - - - 142, 406

Batteries, gas, and a carbon consuming, R. - - - - - 404
Benzaldoxime, Frank K. Cameron, - - - - - - - - 409
Benzene, acetic acid and water, John Waddell, - - - - 233
— and alcohol, boiling-point curve, E. F. Thayer, - - - 382
— β-naphthol and picric acid, application of the phase rule, R. 202
— in phenol, solid solutions of, R. - - - - - - 506
— solid solutions of pyridin and piperidin in, R. - - 507
— solutions, freezing-points, R. - - - - - - 63
— solutions of β-naphthol and picric acid, application of mass law, R. 265
Benziloorthocarboxylic acid, C. A. Soch, - - - - - - 364
Benzoic acid, monosubstituted, etherification and saponification, R. 65
Benzophenon, supercooled, crystallization of, R. - - - - 448
Benzoyl ester of acethydroxamic acid, Frank K. Cameron, - - 276
— peroxid, formation by active oxygen, R. - - - - - 202
Beryllium, valency of, R. - - - - - - - 400
Bimalate of ammonium, racemic transformation of, R. - - - 402
Binary electrolyte, Thomson effect in, R. - - - - - 513
Bodies, elastic and light, R. - - - - - - - - 346
Boiling-point curves for benzene and alcohol, E. F. Thayer, - - 382
— method, modification of Landsberger's, R. - - - - 507
— molecular weights by, R. - - - - - - 400
Boiling-points of isomeric aliphatic compounds, R. - - 341, 398
— measurement of dissociation of electrolytes, R. - - 141
— regularities in, R. - - - - - - - - 398
Boyle and Charles, variation from the law of, R. - - - 139
Bromic acid, reduction of, and the law of mass action, R. - - 510
Bromin and chlorin, exchange in aromatic compounds, R. - - 265
— and hydrogen, effect of light on, R. - - - - - 204
Bubble method, capillary constant by, R. - - - - - 524

Cadmium amalgams, electromotive behavior, R. - - - - - 511
— and iron, electrolytic separation of, R. - - - - 456
— and zinc, electrolytic separation, R. - - - - - 268
— and zinc, latent heats of evaporation, R. - - - - 506
— and zinc salts, transference numbers, R. - - - - 516
Caesium, rubidium and potassium, crystallography of the selenates, R. 346
Calcium chlorid, solutions, electrolysis of, R. - - - - - 456
— mesitylenate and water of crystallization, R. - - - 401
Callendar and Barnes on the Clark cell, R. - - - - - 204
Calomel electrode, temperature coefficient of potential, R. - - 68, 204
Calorimetry, nomenclature and notation in, R. - - - - - 505
Camphor, optical inversion of, R. - - - - - - 60
Camphoric acid, optically inactive derivatives, R. - - - - 60
Capacity of lead accumulator with varying currents, R. - - - 72
— polarization of metallic foil, R. - - - - - - 404
Capillarity, researches with areometer, R. - - - - - 61
Capillary constants by bubble method, R. - - - - - - 524
— electrometer, R. - - - - - - - 66, 515
Carbon bisulfid, specific gravity of solutions of sulfur in, R. - - 398
— chains, aliphatic, R. - - - - - - - 342
— compounds, molecular weights of, R. - - - - - 507
— consuming and gas batteries, R. - - - - - 404
— dioxid and water, absorption and emission of, R. - - 407
— electrodes, thermochemical theory of the cell with, R. - 204
Carbonate, primary tetramincobalto, R. - - - - - - 406
Carbonic anhydrid, density of oxid carbonic, anhydrid and nitrous oxid, R. 260
— oxid, density of oxid carbonic, anhydrid and nitrous oxid, R. - 260
Carbonylsulfid, velocity of hydrolytic decomposition, R. - - - 203
Catalysis and hydrolysis, R. - - - - - - - - 402
— of methyl acetate by salts with mixed properties, R. - 403

Catalytic action of vapors and gases on the oxidation of phosphorus, R. - 523
Caustic alkali solutions on tartaric acid, R. - - - - - 508
Cell, Clark, Callendar and Barnes on, R. - - - - - - 204
— Clark, H-form, variations in E. M. F. with temperature, R. - 511
— gas, R. - - - - - - - - - 68
— theory of, with carbon electrodes, R. - - - - - 204
— variance of voltaic, Wilder D. Bancroft, - - - - - 427
Cells, galvanic precipitation, R. - - - - - - - 267
— reduction and oxidation, R. - - - - - - 452
— standard, apparatus for self-acting temperature compensation, R. 512
Chains, aliphatic carbon, R. - - - - - - - 342
— open, solid solutions among compounds with, R. - - 507
— side, influence on reaction velocities, R. - - - - 342
Change of weight in chemical reactions, R. - - - - 137
Characters, crystallographic, of isomorphous salts, R. - - - 346
Charles and Boyle, variations from the laws of, R. - - - 139
Charlottenburg, unit of electrical resistance at Imperial Institute, R. - 405
Chemical action of electrical oscillations, R. - - - - - 75
— composition and physical properties of liquids, R. - - 138
— constitution and fluorescence, R. - - - - 208
— electrical and geometrical properties of crystals, R. - - 346
— elements in relation to heat, R. - - - - 504
— equilibrium and electromotive force, R. - - - - 452
— reactions, change of weight, R. - - - - - 137
— reactions, effect of solvent, R. - - - - - - 449
— statics, problem of, P. Duhem, - - - - - - 1, 91
Chemically prepared gases and air at temperatures 350°–500°, under atmospheric pressure, R. - - - - - - - 448
Chloracetyl groups, effect on rotary power of glycerates and tartrates, R. 523
Chlorid of ammonium, dry, Baker's research on vapor-density of, R. - 511
— of calcium solutions, electrolysis of, R. - - - - 456
— ferric, hydrolysis of, R. - - - - - - 202, 402
— hydrogen, and ammonia, drying of, R. - - - 511
— of platinum, electrolysis of, R. - - - - - - 269
— of sodium, electrolysis of, R. - - - - - - 344
— telluric, action on acid, R. - - - - - - - 64
Chlorin and bromin, exchange in aromatic compounds, R. - - 265
— molecules, velocity when reacting, R. - - - - - 58
Chromium, electromotive behavior of, R. - - - - - 450
Citric, tartaric and oxalic acids, surface-tensions of, R. - - - 523
Clark cell, Callendar and Barnes, R. - - - - - - 204
— H-form, variations in E. M. F. with temperature, R. - - 511
Clark element, transformation of zinc sulfate in, R. - - - 267
Clouds, re-formation of, influence of dissolved substances and electrification, R. - - - - - - - - - 514
Coagulation of colloid substances, speed of, R. - - - - 511
Cobalt, atomic weight of, R. - - - - - - - - 396
— from copper, technical electrolytic separation, R. - - 269
— and zinc, electrolytic separation, R. - - - - - 268
Coefficients, temperature, of the potential of the calomel electrode, R. 204
Coherent conducting surface layer, criterion for, R. - - - 524
Cohesion, specific, and surface-tension of freezing gold, R. - - 346
Cold and heat regulator, R. - - - - - - - - 138
Colloid substances, speed of coagulation, R. - - - - - 511
Colloids, electrical transference, R. - - - - - - - - 69
Color of the ions, R. - - - - - - - - - 406
Coloring due to iron in sedimentary rocks, origin of rocks, R. - - 509
Combination of bromin and hydrogen, effect of light on, R. - - 204
Comment on "The diffusion constants of several metals in mercury," R. - 510

Comments and experiments on anomalies near the critical point, R. - 199
Comparison, Rowland's mercury and Griffiths platinum thermometers, R. 504
— of thermometers, instrument for, R. - - - - - 505
Compensation, self-acting temperature, standard cells, apparatus for, R. 512
Components, equilibria in solution containing three, R. - - - 202
Compounds, aromatic, exchange of bromin and chlorin in, R. - 265
— of carbon, molecular weights of, R. - - - - 507
— inorganic, constitution of, R. - - - - - 399
— with open chains, solid solutions among, R. - - - 507
— spark spectra of, R. - - - - - - 207
Compression and liquefaction of gases, R. - - - - - 140
Concentration of acid in the lead accumulator, R. - - - 453
— displacements by the current in solutions of electrolytes, R. - 69
— fall of and diffusion, R. - - - - - 266
Condensation and critical phenomena of substances and mixtures, R. 400, 507
— of mixtures of two substances, R. - - - - 200
Conducting gases, application of diffusion to, R. - - - - 515
— surface layer, criterion for coherency of, R. - - - 524
Conduction of heat and electricity, R. - - - - - 73
— of heat in rarified gases, R. - - - - - 341
Conductivities, electric, and freezing-points of water in formic acid, R. - 521
— of electrolytes, R. - - - - - - 405
Conductivity, electric, of nitric acid, R. - - - - - 406
— two electrolytes with no common ion, R. - - - 519
— of electrolytes for very rapid oscillations, R. - - - 73
— of ferric chlorid solutions, influence of magnetism on, R. - 73
— of liquids in thin layers, R. - - - - - 519
— of neo- and praseo-dymium sulfates, R. - - - 520
— of potassium and sodium sulfate solutions, R. - - - 406
— of salts in pyridin, R. - - - - - - 206
— thermal of nitrogen peroxid, R. - - - - 65, 398
Constancy of normal resistances of manganin, R. - - - 519
Constant, dielectric and refractive index in magnetic field, R. - - 271
— temperature bath, R. - - - - - - 137
— temperature device, Hamilton P. Cady, - - - - 242
Constants, capillary, by bubble method, R. - - - - 524
— diffusion, of metals in mercury, comment on, R. - - - 510
— dissociation, from increased solubility, R. - - - 454
— optical of sodium, R. - - - - - - 345
— thermal of the elements, R. - - - - - 397
Constitution, chemical, and fluorescence, R. - - - - 208
— of eutectic alloys, R. - - - - - - 401
— and fluorescence, R. - - - - - - 408
— of inorganic compounds, R. - - - - - 399
Contraction and specific rotation in optically active solutions, R. - - 272
Conversion of ammonium thiocyanate into thiourea, J. Waddell, - 525
— of thiourea into ammonium thiocyanate, J. Waddell, - - 525
Copper, electroanalytic separation from silver, R. - - - 452
— from nickel, cobalt, iron and zinc, technical electrolytic separation. R. - - - - - - - - - 269
— from silver, mercury or arsenic, electrolytic separation of, R. - 268
Criterion for coherency of conducting surface layers, vapor pressure of films, R. - - - - - - - - - 524
Critical phenomena and condensation of substances and mixtures, R. 507
— of mixtures, R. - - - - - - - 200
— of substances and mixtures, R. - - - - - 400
Critical point, anomalies near the, R. - - - - - 199
Cryoscopic behavior of orthonitrophenol, R. - - - - 62
— investigation of acid amids. R. - - - - - - 62
— methods, R. - - - - - - - - 64

Crystalline forms and supersaturation, R. - - - - - - 401
— structure of gold and platinum nuggets and ingots, R. - 75
Crystallization, fractional, C. A. Soch, - - - - - - 43
— rate of, R. - - - - - - - - - 65
— of supercooled benzophenon, R. - - - - - - 448
— velocity of, R. - - - - - - - - 450
— theory of water of, R. - - - - - - - 401
Crystallized salts, rate of dehydration, R. - - - - - 403
Crystallographic characters of isomorphous salts, R. - - - 345
Crystallography of selenates of potassium, rubidium and caesium, R. - 346
Crystals, properties of, electrical, chemical and geometrical, R. - - 346
Current, electric movements brought about by, R. - - - 270
— electric, in organic chemistry, R. - - - - - - 518
— partition among ions, R. - - - - - - 70
— residual, theory of, R. - - - - - - - 66
Curve, boiling-point, for benzene and alcohol, E. F. Thayer, - 382

Dalton's atomic theory, genesis of, R. - - - - - - 58
Decomposition, chemical of sulfur, R. - - - - - 140
— electrolytic, of aqueous solutions, R. - - - - 451
— hydrolytic, of carbonylsulfid, velocity of, R. - - - 203
— of silver salts by pressure, R. - - - - 404, 513
Dehydration, rate of crystallized salts, R. - - - - 403
Densities of oxid, carbonic anhydrid and nitrous oxid, R. - - 260
— of solutions, H. T. Barnes and A. P. Scott, - - - 539
— vapor, at extreme degrees of heat, R. - - - - 341
Density of liquids, research with areometer, R. - - - - 61
— measurements with two areometers, R. - - - - 506
— temperature of methyl alcohol solutions, R. - - 61
— vapor, of dry ammonium chlorid, Baker's research on, R. - 511
Depolarization of mercury and platinum electrodes, R. - - 67
— rate of, and dielectric constants, R. - - - - 74
Dewar and Fleming, in low temperature researches, reduction of temperatures, R. - - - - - - - - 519
Diamond, reproduction of, R. - - - - - - - - 59
Dielectric behavior of ice, R. - - - - - - - 521
— constants and rate of depolarization, R. - - - - 74
— constant and refractive index in magnetic field, R. - - 271
— constants of solids, R. - - - - - - - 74
— properties of liquid mixtures, R. - - - - - 74
Differences, single, of potential, Hector R. Carveth, - - - 289
— of vapor pressures, differential method for, R. - - 200
Differential method for vapor-pressure differences, R. - - - 200
— telephone for determining electrolytic resistances, R. - 73
Diffusion, application to conducting gases, R. - - - - - 515
— constants of metals in mercury, comment on, R. - - 510
— of electrolytes, R. - - - - - - - - 266
— and fall of concentration, R. - - - - - - 266
Dilute acids, rate of solution of zinc in, R. - - - - - 343
— solution laws, simplicity of, and osmotic pressure, R. - 509
Direct currents from alternating, by electrochemical process, R. - - 72
Discharge, electric in synthesis of organic substances, R. - - 402
— of electricity from points, R. - - - - - - 343
Dispersion, electric, anomalous, R. - - - - - - 346
— and molecular refraction of dilute solutions, R. - - - 74
Displacement of concentrations by the current in solutions of electrolytes, R. - - - - - - - - - 69
Dissociated and non-dissociated molecules, motivities of, R, - - 266

Dissociation or association, R. - - - - - - - - 399
— in aqueous alcohol, R. - - - - - - - - 454
— constants from increased solubility, R. - - - - - 454
— of electrolytes, heat of, R. - - - - - - 344
— electrolytic, measured, by boiling-point method, R. - - 141
— electrolytic, and osmotic pressure, R. - - - - 140, 399
— of gases, and variation from laws of Boyle and Charles, R. - 139
— heat, of iodin, R. - - - - - - - - 398
— heats of, for nitrogen acids, R. - - - - - - - 69
— hydrolytic, R. - - - - - - - - - 342
— of minium, R. - - - - - - - - - 200
— of nitrogen peroxid, R. - - - - - - - 261
— spectra of melted salts, R. - - - - - - - 207
— and taste of acids, R - - - - - - - - 206
Dissolved electrolytes, temperature coefficients of the potential of the calomel electrode with different dissolved electrolytes, R. - 204
— substances and electrification, influence on re-formation of clouds, R. - - - - - - - - - 514
Dissolving of platinum and gold in electrolytes, R. - - - - 516
Distribution of mercuric chlorid between toluene and water, Oliver W. Brown, - - - - - - - - - 51
Double salts containing selenium, R. - - - - - - - 508
Dropping electrode, principle of, R. - - - - - - - 454
Drying of ammonia and hydrogen chlorid, R. - - - - - 511
Dyes, azo, dynamic investigation of, R. - - - - - - 342
Dynamic investigation of azo dyes, R. - - - - - - - 342

Effect of light on combination of hydrogen and bromin, R. - - 204
— solubility, for tri-ionic salts, R. - - - - - - 450
Efficiency of lead accumulator, and concentration of the acid, R. - 453
Efflorescent transparent hydrates, vapor-tensions of, R. - - - 263
Elastic bodies and light, R. - - - - - - - - 346
Electric, anomalous dispersions, R. - - - - - - - 346
— conductivities and freezing-points of water in formic acid, R. 521
— conductivity of nitric acid R. - - - - - - 406
— current, movements brought about by, R. - - - - 270
— current in organic chemistry, R. - - - - - - 518
— currents, self-recording by electrolytic methods, R. - - 142
— discharge, in synthesis of organic substances, R. - - - 402
— furnace, tubular, R. - - - - - - - - 58
— and magnetic vibrations in Hertz's waves, R. - - - - 271
— process, formation of mercury films, R. - - - - 518
— vibrations, retardation of, R. - - - - - - 75
— waves, absorption in electrolytes, R. - - - - - 271
— waves, short, refractive indices for, R. - - - - - 207
Electrical, chemical and geometrical properties of crystals, R. - 346
— field, viscosity of non-conducting liquids in, R. - - - 76
— oscillations, chemical action of, R. - - - - - 75
— process for mercury films, R. - - - - - - 142
— properties of newly prepared gases, R. - - - - 514
— resistance of solutions, a function of pressure and temperature, R. 405
— resistance, unit of Imperial Institute, Charlottenburg, R. - 405
— transference of colloids, R. - - - - - - - 69
Electricity, discharge of, from points, R. - - - - - - - 343
— of heat, conductivity of, R. - - - - - - - 73
— law governing generation of, R. - - - - - - 520
— volta-, influence of proximity of substances upon, R. - - - 513
Electrification and dissolved substances, influence on re-formation of clouds, R. - - - - - - - - - 514

Electrified bodies, action of X-rays on, R. - - - - - 208
Electroanalytic precipitation of silver, separation from copper, R. - 452
Electrocapillary phenomena, R. - - - - - 267
Electrochemical introduction of hydroxyl into azobenzene, R. - - 72
— change of alternating to direct currents, R. - - - 72
— actinometers, R. - - - - - - - - - 205
— notes, R. - - - - - - - - - - 205
Electrochemistry, industrial applications of, R. - - - - 518
— and ion reactions, R. - - - - - - 71
— relation to organic chemistry, R. - - - - - 71
Electrode, aluminum as an, R. - - - - - - 520
— dropping, principle of, R. - - - - - - 454
Electrode-holder, R. - - - - - - - 520
Electrodes, calomel, temperature coefficients of the potential, R. - - 204
— carbon, thermochemical theory of the cell with, R. - - 204
— mercury and platinum, depolarization of, R. - - - 67
— small, temperature of electrolytes on surface of, R. - - 270
Electrolysis, active state of gases prepared by, R. - - - - 270
— of alkaline salts of fatty acids, R. - - - - 71
— of calcium chlorid solutions, R. - - - - - 456
— chlorids of platinum on, R. - - - - - 269
— of sodium chlorid, R. - - - - - - 344
— thermal equilibrium in, D. Tommasi, - - - - 229
— zinc, gold, R. - - - - - - - 142
Electrolyte, binary, Thomson effect in, R. - - - - 513
Electrolytes, absorption of electric waves, R. - - - - 271
— conductivities of, R. - - - - - - 405
— diffusion of, R. - - - - - - - 266
— dissociation measured by boiling-points, R. - - - 141
— dissolved, temperature coefficients for potential with calomel electrode, R. - - - - - - - 204
— dissolving platinum and gold in, R. - - - - 516
— heat of dissociation of, R. - - - - - 344
— resistance of, new method for, R. - - - - - 519
— surface travel on, R. - - - - - - 407
— telephone for measuring resistances, R. - - - - 73
— temperature on surface of small electrodes, R. - - 270
— two, with no common ion, conductivity of, R. - - - 519
Electrolytic behavior of fluo- and fluoxy-salts, R. - - - 406
— decomposition of aqueous solutions, R. - - - - 451
— dissociation and osmotic pressure, R. - - - 140, 399
— formation of persulfuric acid, R. - - - - - 345
— precipitation of gold, R. - - - - - - 516
— precipitation of nickel, R. - - - - - - 70
— preparation of iodoform, R. - - - - - 71, 344
— preparation of perchloric acid and its salt, R. - - - 269
— reduction of aldehydes and ketones, R. - - - 456
— reduction of the nitro-group, R. - - - - - 455
— separation of cadmium and iron, R. - - - - 456
— separation of metals, voltameter in measurement of, R. - - 71
— separations, R. - - - - - - - - 268
— for technical purposes, R. - - - - - - 269
— solutions, evolution of light at electrodes in, R. - - 518
— stand, R. - - - - - - - - - 520
— thermopiles, R. - - - - - - - - 512
Electrolytical method for self-recording of electric currents, R. - - 142
Electrolytically precipitated iron, R. - - - - - 517
Electrometer, capillary, R. - - - - - - - - 66
— a new form of, R. - - - - - - - - 512
— as indicator in titration, R. - - - - - - 68
Electromotive behavior of chromium, R. - - - - 450

Electromotive behavior of cadmium amalgams, R. - - - - - 511
Electromotive force, and chemical equilibrium ,R. - - - - 452
— effect of complex ions, R. - - - - - - 452
— and efficiency of lead accumulators, R. - - - 453
— of H-form Clark cell, variations with temperature, R. - - 511
— and magnetism, R. - - - - - - 69
Electromotive forces between amalgams, H. P. Cady, - - - 551
Electrostenolysis, R. - - - - - - - 517
Element, Clark, transformation of zinc sulfate in, R. - - - 267
Elements, chemical, in relation to heat, R. - - - - - 504
— normal, D. McIntosh, - - - - - - 185
— permeability to Röntgen rays, R. - - - - 208
— refractive equivalent of, R. - - - - - - 206
— thermal constants of, R. - - - - - - 397
— ultraviolet spark spectra of, R. - - - - - 207
Emission and absorption of water and carbon dioxid, R. - - 407
Energy of bases with mixed properties, R. - - - - 142, 406
— of toluene and xylene sulfonic acids, R. - - - 406
Epichlorhydrin, potash on, in the presence of alcohols, R. - - 403
Equation of state, R. - - - - - - - 260
Equilibria in solutions containing three components, R. - - - 202
— of stereoisomers, Wilder D. Bancroft, - - - 143, 245
— in three component systems, two liquid phases, R. - - 62
Equilibrium, chemical, and electromotive force, R. - - - 452
— $CO + H_2O \rightleftharpoons CO_2 + H_2$, study of explosives, R. - - 450
— between ethyl alcohol and sulfuric acid, R. - - - 64
— in systems ether-water and ether-water-malonic acid, R. - - 265
— in system : water, sodium chlorid, and succinonitril, R. - 264
— thermal, in electrolysis, D. Tommasi, - - - - 229
— in three component systems, R. - - - - - 264
Equivalent, mechanical, of heat, Rowland's value in terms of Paris hydrogen thermometer, R. - - - - - - 504
Equivalents, refractive, of the elements, R. - - - - - - 206
Esterification, R. - - - - - - - - - 266
Ether and alcohol, temperature coefficients of salt solutions, R. - - 71
Ether, isothermals of, R. - - - - - - - 506
Ether-water, equilibrium in system, R. - - - - - - 265
Ether-water-malonic acid, equilibrium in system, R. - - - 265
Etherification of monosubstituted benzoic acids, R. - - - - 65
Ethyl alcohol and sulfuric acid, equilibrium between, R. - - - 64
Ethyl oxid, adiabatic relations of, R. - - - - - - 199
Ethylic and methylic glycerate and tartrates, effect of chloracetyl groups on rotatory power, R. - - - - - - - 523
Eutectic alloys, constitution of, R. - - - - - - 401
Evaporation, latent heats of zinc and cadmium, R. - - - 506
Evolution of light at electrodes in electrolytic solutions, R. - - 518
— of oxygen upon reduction, R. - - - - - - 342
Expansion of solutions of ammonia salts, R. - - - - - 201
Experiments and comments on anomalies near the critical point, R. - 199
— with micromanometer, R. - - - - - - 200
— on van der Waals's surface for mixtures, R. - - - 201
Explosive gases, inflammability of thin layers, R. - - - - 267
Explosives, study of, R. - - - - - - - - 450
Extreme degrees of heat of vapor densities, R. - - - - - 341

Factors, integrating, Paul Saurel, - - - - - - - 116
Fall of concentration and diffusion, R. - - - - - - 266
Fatty acids, electrolysis of alkaline salts, R. - - - - - 71
Ferric alum, speed of reduction by sugar, R. - - - - - 203

Ferric chlorid, hydrolysis of, R. - - - - - - 202, 402
— solutions, influence of magnetization on, R. - - - - 73
Films of mercury, by electrical process, R. - - - - - 142, 518
— vapor-pressure of, R. - - - - - - - - 524
Flame illumination, development, R. - - - - - - - 408
Fleming and Dewar on low temperature research, reduction of temperatures, R. - - - - - - - - 519
Fluo- and fluoxy-salts, electrolytic behavior of, R. - - - - 406
Fluorescence and actino-electricity, R. - - - - - 521
— chemical constitution, R. - - - - - - - 208
— and constitution, R. - - - - - - - - 408
Fluorescent compounds, R. - - - - - - - - 408
Fluorid, telluric, action on acid, R. - - - - - - 64
Fluorin, atomic index of refraction, R. - - - - - - 407
— compounds, volatility of, R. - - - - - - 140
— liquefaction of, R. - - - - - - - - 396
Foil, metallic polarization, capacity of R. - - - - - 404
Form, crystalline, and supersaturation, R. - - - - - - 401
Formation of azo dyes, dynamic investigations, R. - - - - 342
— of persulfuric acid, electrolytic, R. - - - - - - 345
— and transformation of hylotropic-isomeric forms of matter, R. 39
Formic acid, specific electric conductivities and freezing-points of water in, R. - - - - - - - - - 521
Fractional crystallization, C. A. Soch, - - - - - - 43
Franchot, R., on nascent hydrogen, R. - - - - - - - 206
Freezing-point, lowering of, osmotic pressure, molecular association, R. 399
— solubility lowering, heat of separation, R. - - - - 449
Freezing-points of benzene solutions, R. - - - - - 63
— of dilute sulfuric acid, R. - - - - - - - 262
— with dilute solutions, theories of solution, R. - - - 399
— real and apparent, and methods, R. - - - - - 507
— and specific electric conductivities, water in formic acid, R. - 521
— of stearic and palmitic acids and their mixtures, R. - - 506
Friction, inner, of a solid, R. - - - - - - - - 408
Furnace, tubular electric, R. - - - - - - - - 58

Galvanic polarization theory, R. - - - - - - - 343
— precipitation cells, R. - - - - - - - - 267
Galvanometer as indicator in titration, R. - - - - - 68
Gas batteries and a carbon-consuming battery, R. - - - - - 404
— cell, R. - - - - - - - - - - 68
— oxygen, evolution upon reduction, R. - - - - - 342
Gases, action of ozonizer on, R. - - - - - - - - 60
— chemically prepared, and air, at temperatures 350°–500°, under atmospheric pressure, R. - - - - - - - 448
— compression and liquefaction of, R. - - - - - 140
— conducting, application of diffusion to, R. - - - - 515
— electrolytic, active state of, R. - - - - - - 270
— explosive, inflammability of thin layers, R. - - - - 267
— influence of pressure on index of refraction, R. - - - 523
— and liquids, absorption at various temperatures, R. - - 400
— Maxwell's theory, and the method of approximation, R. - 138
— newly prepared, electrical properties of, R. - - - - 514
— oxidation by liquids, rates of, R. - - - - - 343
— permeation of hot platinum, R. - - - - - - - 60
— rarefied conduction of heat in, R. - - - - - 341
— refractivities, R. - - - - - - - - - 407
— relation of specific heats, R. - - - - - - - 396
— solutions of liquids and solids, R. - - - - - 141

Gases, specific heat of, R. - - - - - - - - - 60
— theory of, R. - - - - - - - - - - 139
— and vapors, catalytic action on the oxidation of phosphorus, R. 523
— variations from laws of Boyle and Charles, and their dissociation, R. 139
Gelatinization, thermodynamics of, R. - - - - - - - 201
General problem of chemical statics, P. Duhem, - - - - 91
Generation of electricity, law governing, R. - - - - - 520
Genesis of atomic theory, R, - - - - - - - - 58
Geometrical, chemical, and electrical properties of minerals, R. - - 346
Glycerates and tartrates, effect of chloracetyl groups on rotatory power, R. 523
Gold, electrolytic precipitation of, R. - - - - - - - 516
— freezing, specific cohesion and surface-tension, R. - - 346
— nuggets and ingots, crystalline structure, R. - - - - 75
— and platinum, dissolving in electrolytes, R. - - - 516
— surface-tension of, R. - - - - - - - 408
— zinc and electrolysis, R. - - - - - - - 142
Griffiths platinum and Rowland's mercury thermometers, comparison of, R. 504

Hall's phenomenon in liquids, R. - - - - - - - 73, 404
— reality of, R. - - - - - - - - - 513
Harmful space in air thermometers, R. - - - - - - 395
Heat, chemical elements in relation to, R. - - - - - 504
— and cold regulator, R. - - - - - - - 138
— conduction of, in rarefied gases, R. - - - - - 341
— of dissociation of electrolytes, R. - - - - - - 344
— of dissociation of iodin, R. - - - - - - 398
— effect on moistening powders, R. - - - - - - 76
— and electricity, conduction, R. - - - - - 73
— extreme degrees, vapor-densities at, R. - - - - 341
— mechanical equivalent, Rowland's value in terms of Paris hydrogen thermometer, R. - - - - - - - 504
— of separation, lowering of freezing-point solubility, R. - - 449
— of solution of liquid hydriodic acid, F. G. Cottrell, - - 492
— specific, of gases, R. - - - - - - - - 60
Heats of dissociation for nitrogen acids, R. - - - - - 69
— latent, of evaporation of zinc and cadmium, R. - - - 506
— liquefaction, and molecules, R. - - - - - 398
— molecules and liquefactions, R. - - - - - - 397
— of neutralization of acids and bases, R. - - - - 63
— specific, of certain gases, R. - - - - - - - 396
— specific, of liquids, R. - - - - - - - 137
— by the method of mixtures, R. - - - - - - 340
Helium and hydrogen, liquefaction of, R. - - - - - 505
Hemipinic and papaverinic acids, R. - - - - - - 271
Herman, F. Reply by, R. - - - - - - - 397
Hertz's waves, electric and magnetic vibrations in, R. - - - 271
H-form Clark cell, variation in E. M. F. with temperature, R. - 511
Holder, electrode-, R. - - - - - - - - 520
Homologous series of paraffins, isomerism, R. - - - - - 340
Hydrates of isopropylic alcohol, R. - - - - - - - 61
— of magnesium platinocyanides, R. - - - - - 401
— transparent, efflorescent, vapor-tensions of, R. - - - - 263
Hydriodic acid, heat of solution, F. G. Cottrell, - - - - 492
— solubility of stannous iodid in, R. - - - - - - 202
Hydrochloric acid solutions, concentrated, vapor-tension of, F. B. Allan, 120
Hydrogen and bromin, effect of light on, R. - - - - - 204
— chlorid and ammonia, dry, Baker's research on, R. - - 511
— and helium, liquefaction of, R. - - - - - - 505
— nascent, R. Franchot on, R. - - - - - - 206

Hydrogen, note on transference number, Wilder D. Bancroft, - - 496
— and oxygen, occlusion by palladium, R. - - - - 400
— reduction of molybdic anhydrid, R. - - - - 64
— thermometer, Paris, Rowland's value, mechanical equivalent of heat, R. - - - - - - - - 504
— transference number, Douglas McIntosh, - - - - 273
Hydrolysis and catalysis, R. - - - - - - - - 402
— of ferric chlorid, R. - - - - - - - - 202, 402
Hydrolytic decomposition of carbonylsulfid, velocity of, R. - - 203
— dissociation, R. - - - - - - - - 342
Hydroxid, zinc in precipitation, R. - - - - - - 202
Hydroxyl, electrochemical introduction, into azo benzene, R. - - 72
Hylotropic-isomeric forms of matter, R. - - - - - 397
Hyponitrous acid, R. - - - - - - - - 62

Ice, dielectric behavior of, R. - - - - - - - 521
Illumination, flame, development of, R. - - - - - 408
Index of refraction, atomic, of fluorin, R. - - - - 407
— refractive, and dielectric constant in magnetic field, R. - - 271
Indicator, electrometer as, in titration, R. - - - - 68
— galvanometer as, in titration, R. - - - - - - 68
Indicators, John Waddell, - - - - - - - 171
Industrial applications of electrochemistry, R. - - - - 518
Inflammability of thin layers of explosive gases, R. - - - 267
Influence of dissolved substances and electrification on re-formation of clouds, R. - - - - - - - - 514
Inner friction of a solid, R. - - - - - - - 408
Inorganic compounds, constitution of, R. - - - - - 399
Institute, Imperial, Charlottenburg, unit of resistance, R. - - 405
Instrument for comparison of thermometers, R. - - - - 505
Integrating factors, Paul Saurel, - - - - - - 116
Inversion, optical, of camphor, R. - - - - - - - 60
Iodid of lead and potassium, R. - - - - - - 402
— stannous, solubility of, R. - - - - - - - 202
Iodin, heat of dissociation, R. - - - - - - 398
Iodoform, electrolytic preparation of, R. - - - - 71, 344
Ion, conductivity of two electrolytes with no common, R. - - 519
— reaction and electrochemistry, R. - - - - - 71
— solutions of salts with a common, R. - - - - 402
Ionizing power of solvents, R. - - - - - - - 521
Ions, color of, R. - - - - - - - - - 406
— complex, effect on electromotive force, R. - - - 452
— current partition among, R. - - - - - - 70
— migration velocity, and temperature, R. - - - - 141
Iron and cadmium, electrolytic separation of, R. - - - 456
— for copper, technical electrolytic separation, R. - - - 269
— electrolytically precipitated, R. - - - - - 517
— resistance and specific heats of oxids and sulfids, R. - - 60
— in sedimentary rocks, coloring due to, R. - - - 509
Isomeric aliphatic compounds, boiling points of, R. - - - 398
— regularities in boiling-point, R. - - - - 341
— paraffins of formula C_nH_{2n+2}, R. - - - - 340
Isomerism in homologous series of paraffins, R. - - - 340
Isomorphous salts, and crystallographic characters, R. - - - 346
Isopentane, isothermals of, R. - - - - - - - 506
Isopropylic alcohol, hydrates of, R. - - - - - - - 61
Isothermal pressure-surface, F. G. Donnan, - - - - - 417
Isothermals of ether, R. - - - - - - - - 506
— of isopentane, R. - - - - - - - - 506

Jahn, H. Reply to, R. - - - - - - - - 399

Ketones and aldehydes, electrolytic reduction of, R. - - - 456

Landberger's boiling-point method, modification of, R. - - - 507
Latent heats of evaporation of zinc and cadmium, R. - - - 506
Law governing generation of electricity, R. - - - - - 520
— of mass action, reduction of bromic acid and, R. - - 510
Laws of dilute solutions, simplicity of, and osmotic pressure, R. - - 509
— respecting molecular volumes of liquids, R. - - - 398
Layer, conducting surface, criterion for coherency, R. - - - 524
Layers, thin, conductivity of liquids in, R. - - - - 519
Lead accumulator, electromotive force and efficiency, R. - - - 453
— potassium iodid, R. - - - - - - - 402
— salt, curious, lead potassium iodid, R. - - - - 402
Lenard rays, R. - - - - - - - - - 75
Light action, R. - - - - - - - - - 522
— effect of, on combination of hydrogen and bromin, R. - 204
— elastic bodies and, R. - - - - - - 346
— evolution of, at electrodes in electrolytic solutions, R. - 518
Limits of solid state, R. - - - - - - - 58
Liquefaction and compression of gases, R. - - - - - 140
— of fluorin, R. - - - - - - - - 396
— heats and molecules, R. - - - - - - 398
— of hydrogen and helium, R. - - - - - 505
Liquefactions and molecules heats, R. - - - - - 397
Liquid hydriodic acid, heat of solution, F. G. Cottrell, - - - 492
— state and Avogadro's law, R. - - - - - 59
— at boiling-point, volume vapor, R. - - - - 138
— metals, thermoelectric properties of, R. - - - 513
— mixtures, dielectric properties of, R. - - - - 74
— mixtures, properties of, R. - - - - - 507
— phases, two in three component system, R. - - - 264
Liquids, differential method for vapor-pressures, R. - - - 200
— and gases, absorption at various temperatures, R. - - - 400
— Hall's phenomenon in, R. - - - - - 73, 404
— laws respecting molecular volumes of, R. - - - 398
— molecular velocity of, R. - - - - - 395
— molecular velocity of, and its variation with pressure, R. - - 504
— molecular volume of, R. - - - - - 59
— molecular weights of, Clarence L. Speyers, - - 347, 362
— mutually soluble, vapor pressures of, R. - - - 200
— rates of oxidation of gases by, R. - - - - - 343
— reality of Hall's phenomenon in, R. - - - - 513
— specific heats, R. - - - - - - - 137
— and solids, solutions in gases, R. - - - - 141
— supercooled, number of nuclei in, R. - - - - 448
— supercooled, solubility of, R. - - - - - 61
— in thin layers, conductivity of, R. - - - - - 519
— viscosity of non-conducting in constant electric field, R. - 76
Low pressure, oxygen at, R. - - - - - - - 397
Low temperature researches, reduction of platinum to normal air temperatures, R. - - - - - - - 519
Lowering of freezing-point, osmotic pressure, molecular association, R. 399
— of freezing-point solubility, R. - - - - - 449

Magnesium platinocyanid, hydrates of, R. - - - - - 401
Magnetic and electric vibrations in Hertz's waves, R. - - - 271
— field, dielectric constant and refractive index in, R. - - 271
— susceptibility and atomic magnetism, R. - - - 268

Magnetism, atomic, and magnetic susceptibility, R. - - - 268
— and electromotive force, R. - - - - - - 69
— influence on conductivity of ferric chlorid solutions, R. - - 73
Malonic acid-water-ether, equilibrium in system, R. - - - 265
Manganin, constancy of normal resistances of, R. - - - 519
Mass action, reduction of bromic acid and the law of, R. - - 510
Mass law application to benzene solutions of β-naphthol and picric acid, R. 265
— and phase rule, simultaneous application, R. - - - 449
Matter, hylotropic-isomeric forms of, R, - - - - 397
Maxwell's theory of gases, and the method of approximation, R. - - 138
Measurements, osmotic, R. - - - - - - 203
Mechanical equivalent of heat, Rowland's value in terms of Paris hydrogen thermometer, R. - - - - - - - 504
— influences in formation of metallic sulfid, R. - - - 402
Melted salts, dissociation spectra of, R. - - - - - 207
Membrane, semipermeable, osmotic pressure against, R. - - 203
Membranes, metallic, polarization at, R. - - - - - 205
Mercuric chlorid, distribution between toluene and water, Oliver W. Brown, - - - - - - - - - 51
Mercury ammeter, thermal, R. - - - - - - - 53
— from copper, electrolytic separation of, R. - - - 268
— diffusion constants of metals in, comment on, R. - - 510
— films by electrical process, R. - - - - 142, 518
— and platinum electrodes, depolarization of, - - - 67
— pump of Henriet, R. - - - - - - - 58
— Rowland's and Griffiths platinum thermometers, comparison of, R. - - - - - - - - - 504
— vapor, tension of, R. - - - - - - - 260
— voltmeter, standard thermal, R. - - - - - - 68
Mesitylenate of calcium and water of crystallization, R. - - 401
Mesotartaric, racemic and tartaric acids, reciprocal transformation, R. - 508
Metallic foil, polarization capacity of, R. - - - - - 404
— membranes, polarization at, R. - - - - - - 205
— precipitates, R. - - - - - - - - 342
— salts, influence on rate of solution of zinc, R. - - - 343
— sulfids, formation by mechanical influences, R. - - 402
Metals, atomic weight of, in salts and crystallographic salts, R. - - 346
— diffusion constants, in mercury, comments on, R. - - 510
— liquid, thermoelectric properties, R. - - - 205, 513
Method, boiling-point, molecular weights by, R. - - - 400
— of bubbles, capillary constants by, R. - - - - 524
— differential for vapor-pressure differences, R. - - - 200
— of mixtures, specific heats by, R. - - - - - - 340
— modification of Landsberger's boiling-point, R. - - 507
— of ripples, surface-tension of dilute aqueous solutions, R. - - 524
Methods, cryoscopic, R. - - - - - - - 264
— freezing-point, and real and apparent freezing-points, R. - - 507
Methyl acetate, catalysis by salts with mixed properties, R. - - 403
Methyl alcohol solutions, temperature of maximum density, R. - - 61
Methylic and ethylic glycerates and tartrates, effect of chloracetyl groups on rotatory power, R. - - - - - - 523
Micromanometer, experiments with, R. - - - - - - - 200
Migrant matter, R. - - - - - - - - 62
Migration velocity, temperature influence, R. - - - - - 141
Minium, dissociation of, R. - - - - - - - 200
Mixed properties, energy of bases with, R. - - - - - 406
Mixtures, condensation and critical phenomena of, R. - - 400, 507
— liquid, properties of, R. - - - - - - - 507

Mixtures, specific heats by the method of, R. - - - - - 240
— of stearic and palmitic acids, freezing-points of, R. - - 506
— of substances, condensation and critical phenomena of, R. - 200
— van der Waals's surface for, R. - - - - - 201
Molecular association, lowering of freezing-point, osmotic pressure, R. 399
— refraction and dispersion of dilute solutions, R. - - - - 74
— refraction of dissolved salts and acids, R. - - - 345
— rotation of optically active salts, R. - - - - 74
— velocity of liquids, R. - - - - - - - 395
— velocity of liquids, variation with pressure, R. - - - 504
— volume of liquids, R. - - - - - - - 59
— volumes of liquids, laws respecting, R. - - - - - 398
— weight of sulfur, Samuel D. Gloss, - - - - 421
Molecular weights by the boiling-point method, R. - - - 400
— of carbon compounds, R. - - - - 507
— of liquids, Clarence L. Speyers, - - 347, 362
— modification of Landsberger's boiling-point method, R. 507
— of solids, R. - - - - - - - 398
Molecules, dissociated and non-dissociated, motivities of, R. - - 266
— and liquefaction heats, R. - - - - - 397, 398
Molybdic anhydrid, reduction by hydrogen, R. - - - - 64
Motivities of dissociated and non-dissociated molecules, R. - - 266
Movements brought about by the electric current, R. - - 270
Mutually soluble liquids, vapor-pressures of, R. - - - - - 200

Naphthalene and aqueous acetone, Hamilton P. Cady, - - 168
β-Naphthol and picric acid in benzene solution, application of mass law, R. 265
— picric acid and benzene ; application of the phase rule, R. - 202
Nascent hydrogen, R. Franchot on, R. - - - - - - 206
Nature of semi-permeable walls, R. - - - - - - 509
Neo- and praseodymium sulfates, conductivity of, R. - - - 520
Neutralization, heat of, for acids and bases, R. - - - 63
Nickel, atomic weight of, R. - - - - - - - 396
— from copper, technical electrolytic separation, R. - - 269
— electrolytic precipitation, R. - - - - - - 70
Nitric acid, electric conductivity of, R. - - - - - 406
— solutions, electroanalytic precipitation of silver, R. - - 452
Nitrogen acids, affinity constants and heats of dissociation, R. - 69
— peroxid, dissociation of, R. - - - - - - 261
— peroxid, thermal conductivity of, R. - - - - 65, 398
Nitro-group, electrolytic reduction of, R. - - - - - - 455
Nitrogurets, R. - - - - - - - - - 72
Nitrous oxid, absorption by aqueous solutions, R. - - - - 63
— density of oxid, carbonic anhydrid, and nitrous oxid, R. - 260
Nomenclature and notation in calorimetry, R. - - - - - 505
Non-combination of dry hydrogen chlorid and ammonia, Baker's research on, R. - - - - - - - - - 511
Normal elements, D. McIntosh, - - - - - - - 185
— resistances of manganin, constancy of, R. - - - 519
Notation and nomenclature in calorimetry, R. - - - - - 505
Note on transference number of hydrogen, Wilder D. Bancroft, - 496
Nuclei in supercooled liquids, variation in number, R. - - - 448
Number of nuclei in supercooled liquids, R. - - - - 448
Numbers, transference, for zinc and cadmium salts, R. - - - 516

Occlusion of oxygen and hydrogen by palladium, R. - - - 400
Open chain compounds, solid solutions among, R. - - - - 507
Optical activity, R. - - - - - - - - 407
— antipodes, reciprocal transformation of, R. - - - 345

Optical constants of sodium, R. - - - - - - 345
— inversion of camphor, R. - - - - - - - 60
Optically active salts, molecular rotation of, R. - - - 74
— active solutions, contraction and scientific rotation, R. - - 272
Organic acids, synthesis of, R. - - - - - - - 72
— addition-products, application of the phase rule to study of, R. - 61
— chemistry, electric current in, R. - - - - - 518
— chemistry, relation of electrochemistry to, R. - - - - 71
— substances, synthesis by electric discharge, R. - - - 402
Origin, probable, of the red rocks, R. - - - - - - 509
Orthonitrophenol, cryoscopic behavior of, R. - - - - - 62
Oscillations, very rapid, conductivity of electrolytes for, R. - - 73
Osmotic measurements, R. - - - - - - - 203
Osmotic pressure, R. - - - - - - - - 403, 510
— and dissociation, R. - - - - - - - 140
— lowering of freezing-point, molecular association, R. - - 399
— and electrolytic dissociation, R. - - - - - 399
— against a semi-permeable membrane, R. - - - - 203
— and simplicity of dilute solution laws, R. - - - 509
— and vapor-pressure of solutions, R. - - - - - 203
Oxalic, tartaric and citric acids, surface-tension of, R. - - 523
Oxid, ethyl, adiabatic relations, R. - - - - - - 199
Oxids of iron, resistance and specific heats, R. - - - - 60
Oxidation of gases by liquids, rates of, R. - - - - - 343
— of phosphorus, catalytic action of vapors and gases, R. - 523
— and reduction cells, R. - - - - - - - - 452
Oxygen, active, R. - - - - - - - - - 342
— active, formation of peroxids, R. - - - - - - 202
— active, from oxidation of sodium sulfite, R. - - - - 63
— evolution of, upon reduction, R. - - - - - - 342
— and hydrogen, occlusion by palladium, R. - - - 400
— at low pressures, R. - - - - - - - - - 397
— spectra of, R. - - - - - - - - - - 271
Ozonizer, action on gases, R. - - - - - - - 60

Palladium, occlusion of oxygen and hydrogen, R. - - - 400
Palmitic, stearic acids and mixtures, freezing-points of, R. - - 506
Papaverinic and hemipinic acids, R. - - - - - - 271
Paraffins, isomeric, of formula C_nH_{2n+2}, R. - - - - - 341
Paris hydrogen thermometer, Rowland's value, mechanical equivalent of heat, R. - - - - - - - - - 504
Partition of current among ions. R. - - - - - - - 70
Perchloric acid and its salts, electrolytic preparation, R. - - 269
Permeability of elements to Röntgen rays, R. - - - - - 208
Permeation of hot platinum by gases, R. - - - - - 60
Peroxid, formation by active oxygen, R. - - - - - - 202
— of nitrogen, dissociation of, R - - - - - 261
— of nitrogen, thermal conductivity of, R. - - - - - 398
— and peroxynitrate of silver, R. - - - - - 508
Peroxynitrate of silver, R. - - - - - - - - 142
— and peroxid of silver, R. - - - - - - 508
Persulfuric acid, electrolytic formation of, R. - - - - - 345
Phase rule, application in study of organic addition-products, R. - 61
— application to system β-naphthol, picric acid and benzene, R. - 202
— and mass law, simultaneous application, R. - - - 449
Phases, two liquid, in three-component system, R. - - - - 264
Phenol, solid solutions of benzene in, R. - - - - - 506
Phenomena, critical, of mixtures, R. - - - - - - - 200
Phenomenon, Hall's, in liquids, R. - - - - - - 404

Phenylnitrocinnamic acid, stereochemistry of, R. - - - - - 138
Phosphorus, oxidation of, catalytic action of vapors and gases, R. - 523
Photoelectric behavior of salts, R. - - - - - - - 267
— phenomena and the photographic process, R. - - 404
Photographic process and photoelectric phenomena, R. - - - 404
Physical properties and chemical composition of liquids, R. - - 138
Picric acid and β-naphthol in benzene solution, application of the mass law, R. - - - - - - - - - 265
– β-naphthol and benzene, application of the phase rule, R. - 202
Piperidin and pyridin in benzene, solid solutions of, R. - - - 507
Platinocyanid of magnesium, hydrates of, R. - - - - - 401
Platinum, chlorids of, on electrolysis, R. - - - - - - 269
— and gold, dissolving in electrolytes, R. - - - 516
— Griffiths, and Rowland's mercury thermometers, comparison of, R. 504
— and mercury electrodes, depolarization of, R. - - - 67
— nuggets, crystalline structure, R. - - - - 75
— permeation by gases, R. - - - - - - - - 60
— temperatures, R. - - - - - - - - - 519
Points, discharge of electricity from, R. - - - - - - 343
Polarization capacity of thin metallic foil, R. - - - - - 404
— galvanic theory of, R. - - - - - - - 343
— at thin metallic membranes, R. - - - - 205
Potash on epichlorhydrin in presence of alcohols, R. - - - 403
Potassium chlorid and aqueous acetone, J. F. Snell, - - - 457
— lead iodid, R. - - - - - - - - 402
— nitrate, water and alcohol, Norman Dodge and L. C. Graton, 498
— rubidium and caesium, crystallography of the selenates of, R. - 346
— and sodium sulfate solutions, conductivity of, R. - - 406
Potential of calomel electrodes, temperature coefficients of, R. - - 68
— of the calomel electrode, temperature coefficients of, R. - 204
— single differences of, Hector R. Carveth, - - - - - 289
Powders, heat effect on moistening, R. - - - - - - 76
Praseo- and neo-dymium sulfates, conductivity of, R. - - - 520
Precipitated, electrolytically, iron, R. - - - - - - 517
Precipitates, metallic, R. - - - - - - - - - 342
Precipitation cells, galvanic, R. - - - - - - - - 267
— electrolytic, of gold, R. - - - - - - - - 516
— of nickel, electrolytically, R. - - - - - - - 70
— of zinc hydroxids, R. - - - - - - - - 202
Preparation, electrolytic, of perchloric acid and its salts, R. - - 269
— of iodoform, electrolytic, R. - - - - - - - 344
Pressure, decomposition of silver salts by, R. - - - - - 404, 513
— influence on refraction of gases, R. - - - - - 523
— molecular velocity of liquids, and its variation with, R. - 504
— vapor of films, R. - - - - - - - 524
— variation of molecular velocity of liquids with, R. - - 395
Pressure, osmotic, R. - - - - - - - - - 403, 510
— and electrolytic dissociation, R. - - - - - 399
— lowering of freezing-point, molecular association, R. - - 399
— against a semi-permeable membrane, R. - - - 203
— and simplicity of dilution laws, R. - - - - - 509
— and vapor of solutions, R. - - - - - - - 203
Pressure-surface, isothermal, F. G. Donnan, - - - - - 417
Pressure and temperature in electrical resistance of solutions, R. - - 405
Pressures, atmospheric, air and chemically prepared gases at 350°–500° under, R. - - - - - - - - - 448
— low, oxygen at, R. - - - - - - - - 397
— vapor, differential method for differences, R. - - - 200
— vapor of mutually soluble liquids, R. - - - - - 200

Primary tetramincobalto carbonate, R. - - - - - - 406
Process, photographic and photoelectric phenomena, R. - - - 404
Properties, electrical, of newly prepared gases, R. - - - - 514
— of liquid mixtures, R. - - - - - - - 507
— of minerals, electrical, chemical and geometrical, R. - - 346
— thermoelectric, of liquid metals, R. - - - - - 513
Propionyl, formation by active oxygen, R. - - - - - - 202
Pseudoracemism, R. - - - - - - - - - 141
Pump, Sprengel, a new form, R. - - - - - - - - 396
Pyridin, conductivity of salts in, R. - - - - - - 206
— and piperidin in benzene, solid solutions of, R. - - - 507
Pyrometer, Roberts-Austen, thermoelectric, R. - - - - 513

Racemic, tartaric and mesotartaric acids, reciprocal transformation, R. - 508
— transformation of ammonium bimalates, R. - - - 402
Racemism, R. - - - - - - - - - - 402
— and pseudoracemism, R. - - - - - - 141
Rarefied gases, conduction of heat in, R. - - - - - - 341
Rate of crystallization, R. - - - - - - - 65
— of dehydration of crystallized salts, R. - - - - - 403
— of solution of solids in their own solutions, R. - - - 65, 403
— of solution of zinc in dilute acids, R. - - - - - 343
Rates of depolarization and dielectric constants, R. - - - 74
— of oxidation of gases by liquids, R. - - - - - 343
Rays, Lenard, R. - - - - - - - - - 75
— Röntgen, R. - - - - - - - - - - 75
— Röntgen and actino-phenomena, R. - - - - - 208
— Röntgen, permeability of elements to, R. - - - - - 208
Reaction, chemical, effect of solvent, R. - - - - - 449
— velocities, influence of side chains, R. - - - - - 342
Real and apparent freezing-points and freezing-point methods, R. - 507
Reality of Hall's phenomenon in liquids, R. - - - - - 513
Reciprocal transformation of optical antipodes, R. - - - - 345
— tartaric, racemic and mesotartaric acids, R. - - - - 508
Red rocks, probable origin of, R. - - - - - - 509
Reduction of bromic acid and the law of mass action, R. - - - 510
— electrolytic, of the nitro group, R. - - - - - 455
— electrolytic, of aldehydes and ketones, R. - - - - 456
— evolution of oxygen gas upon, R. - - - - - 342
— of ferric alum by sugar, speed of, R. - - - - - 203
— in low temperature researches of platinum to normal air temperatures, R. - - - - - - - - - 519
— of molybdic anhydrid by hydrogen, R. - - - - - - 64
— and oxidation cells, R. - - - - - - - 452
Re-formation of clouds, influence of dissolved substances and electrification, R. - - - - - - - - - - 514
Refraction, atomic index, of fluorin, R. - - - - - - 407
— and dispersion of dilute solutions, R. - - - - - - 74
— of gases, influence of pressure on, R. - - - - - 523
— molecular, of dissolved salts and acids, R. - - - - - 345
Refractive equivalents of the elements, R. - - - - - 206
— index and dielectic constant in magnetic field, R. - - - 271
— indices for short electric waves, R. - - - - - 207
Refractivities of certain gases R. - - - - - - - 407
Regularities in boiling-points of isomeric aliphatic compounds, R. - - 341
Regulator for heat and cold, R. - - - - - - - - 138
Relations, adiabatic of ethyl oxid, R. - - - - - - 199
Reply: by F. Herman, R. - - - - - - - - - 397
— to H. Jahn, R. - - - - - - - - - 399

Reproduction of the diamond, R. - - - - - - - - 59
Residual current, R. - - - - - - - - - 66
Resistance, electrical, of solutions, a function of pressure and temperature, R. - - - - - - - - - 405
— electrical, unit of Imperial Institute, Charlottenburg, R. - 405
— of electrolytes, new method for, R. - - - - - 519
— of oxids and sulfids of iron, R. - - - - - 60
Resistances, normal, of manganin, constancy of, R. - - - 519
Retardation of electric vibrations, R. - - - - - - 75
Richards, T. W., on temperature coefficients, R. - - - - 204
Ripples, method of, surface-tension of dilute aqueous solutions, R. - 524
— surface-tension by method of, R. - - - - 272
Roberts–Austen recording pyrometer, thermoelectric pyrometer, R. - 513
Rocks, sedimentary, coloring due to iron, origin of the red, R. - - 509
Röntgen rays, R. - - - - - - - - - - 75
— and actino-electric phenomena, R. - - - - - - 208
— permeability of elements to, R. - - - - - 208
Rotation, angle of a new means of increasing, R. - - - - - 345
— molecular, of salts, R. - - - - - - - - 74
— specific and contraction in optically active solutions, R. - - 272
Rotatory power of glycerates and tartrates, effect of chloracetyl groups on, R. - - - - - - - - - 523
Rowland's mercury, and Griffiths platinum thermometers, comparison of, R. - - - - - - - - - 504
— value, mechanical equivalent of heat, in terms of Paris hydrogen thermometer, R. - - - - - - - - 504
Rubidium, potassium and caesium, crystallography of the selenates, R. - 346
Rule, phase, applications to system β-naphthol, picric acid and benzene, R. 202

Salt, curious, of lead, lead potassium iodid, R. - - - - - 402
Salts, cadmium and zinc, transference numbers of, R. - - - 516
— with a common ion, solutions of, R. - - - - - 402
— crystallized, rate of dehydration, R. - - - - - 403
— dissolved, molecular refraction of, R. - - - - - 345
— double, containing selenium, R. - - - - - 508
— isomorphous, and crystallographic characters, R. - - - 346
— melted, dissociation spectra of, R. - - - - - 207
— metallic, influence on rate of solution of zinc, R. - - 343
— perchloric acid, electrolytic preparation, R. - - - 269
— photoelectric behavior of, R. - - - - - - - 267
— in pyridin, conductivity of, R. - - - - - - 206
— of silver, decomposition by pressure, R. - - - 404, 513
— tri-ionic, solubility effect, R. - - - - - - 450
Saponification of ethers of monosubstituted benzoic acids, R. - - - 65
Sedimentary rocks, coloring matter due to iron, R. - - - 509
Selenates of potassium, rubidium and caesium, crystallography of, R. - 346
Selenium, double salts containing, R. - - - - - - - 508
— spectrum of, R. - - - - - - - - - 271
Self-acting temperature compensation, standard cells, apparatus for, R. 512
Self-recording of electric currents by electrical methods, R. - - - 142
Semipermeable membrane, osmotic pressure against, R. - - - 203
— walls, nature of, R. - - - - - - - - - 509
Separation, electrolytic, of cadmium and iron, R. - - - - 456
— heat of, lowering of freezing-point solubility, R. - - - 449
Separations, electrolytic, R. - - - - - - - - 268
Series, homologous, of paraffins, isomerism in, R. - - - - - 341
Short electric waves, refractive indices for, R. - - - - 207
Side chains, influence on reaction velocities, R. - - - - - 342
Silicates of alkalies, L. Kahlenberg and A. T. Lincoln, - - - 77

Silver from copper, electrolytic separation of, R. - - - - 268
— electroanalytic precipitation, separation from copper, R. - 452
— peroxynitrate of, R. - - - - - - - 142
— peroxynitrate and peroxid of, R. - - - - - 508
— salts, decomposition by pressure, R. - - - 404, 513
Simplicity of dilute solution laws, and osmotic pressure, R. - - 569
Simultaneous application, mass law and phase rule, R. - - - 449
Single differences of potential, Hector R. Carveth, - - - 289
Single and double salts, isothermal pressure-surface, F. G. Donnan, - 417
Sodium chlorid, electrolysis of, R. - - - - - - 344
— chlorid, water and succinonitrile, R. - - - - 264
— optical constants of, R. - - - - - - 345
— and potassium sulfates, conductivity of, R. - - - 406
— sulfite, generation of active oxygen in oxidational, R. - 63
Solid, inner friction of, R. - - - - - - - 408
— solution, transition temperature of, R. - - - 263
Solid solutions of benzene in phenol, R. - - - - - 506
— among compounds with open chains, R. - - - 507
— of pyridin and piperidin in benzene, R. - - - - 507
Solid state, limits of, R. - - - - - - - - 58
Solids, dielectric constants of, R. - - - - - - 74
— and liquids, solutions in gases, R. - - - - 141
— molecular weights of, R. - - - - - - - 398
— rate of solution in their own solutions, R. - - - 65
Solubility of ammonia in water below 0°, R. - - - - - 140
— effect for tri-ionic salts, R. - - - - - 450
— of hydrates of magnesium platinocyanid, R. - - - 401
— increased, dissociation constants from, R. - - - 454
— of stannous iodid, R. - - - - - - - 202
— of supercooled liquids, R. - - - - - - 61
Solution densities, H. T. Barnes and A. P. Scott, - - - - 536
— dilute, laws, simplicity of and osmotic pressure, R. - - 509
— heat of, F. G. Cottrell, - - - - - - - 492
— rate of, of zinc in dilute acids, R. - - - - 343
— solid, transition temperature of, R. - - - - 263
— of solids, rate in their own solutions, R. - - - 65
— theories of, freezing-point with dilute solutions, R. - - 400
Solutions of ammonia salts, expansion of, R. - - - - 201
— aqueous, electrolytic decomposition of, R. - - - 451
— aqueous, and water, susceptibility of, R. - - - 514
— of calcium chlorid, electrolysis of, R. - - - - 456
— containing three components, R. - - - - 202
— dilute aqueous, surface-tension by method of ripples, R. - - 524
— dilute aqueous, vapor tensions of, R. - - - - 262
— dilute, freezing-points with, theories of solution, R. - - 399
— very dilute, transference numbers of zinc and cadmium salts, R. 516
— electrolytic, evolution of light at electrodes in, R. - - - 518
— heat of separation in, R. - - - - - - 449
— of liquids and solids in gases, R. - - - - - 141
— rate of solids in their own solutions, R. - - - 403
— of silicates of alkalies, L. Kahlenberg and A. T. Lincoln, - 77
— solid, of benzene in phenol, R. - - - - - 506
— solid, among compounds with open chains, R. - - - 507
— solid, of pyridin and piperidin in benzene, R. - - 507
— of sulfur in carbon bisulfid, specific gravity of, R. - - 398
— theory of, R. - - - - - - - - 341
Solvent, effect on chemical reaction, R. - - - - - - 449
Solvents, ionizing power of, R. - - - - - - 521
Space, harmful, in air thermometers, R. - - - - - 395

Spark spectra of compounds, R. - - - - - - - 207
— ultraviolet, of the elements, R. - - - - - - 207
Specific cohesion and surface-tension of freezing gold, R. - - 346
— electric conductivities and freezing-points of water in formic acid, R. - - - - - - - - - - 521
— gravity of sulfur solutions in carbon bisulfid, R. - - 398
— heat of gases, R. - - - - - - - - 60
Specific heats of certain gases, R. - - - - - - 396
— of liquids, R. - - - - - - - - 137
— by method of mixtures, R. - - - - - - 340
— of oxids and sulfids of iron, R. - - - - - - 60
Specific rotation and contraction in optically active solution, R. - 272
Spectra, arc, R. - - - - - - - - - 207
— dissociation of melted salts, R. - - - - - 207
— of the element, ultraviolet spark, R. - - - - 207
— of oxygen, sulfur and selenium, R. - - - - - 271
— spark of compounds, R. - - - - - - - 207
Spectrochemistry of nitrogen, R. - - - - - - 522
Spectroscopic studies of argon, R. - - - - - - 207
Speed of coagulation of colloid substances, R. - - - - - 511
— of reduction of ferric alum by sugar, R. - - - - 203
Sprengel pump, a new form, R. - - - - - - - 396
Stand, a new electrolytic, R. - - - - - - - 520
Standard cells, apparatus for self-acting temperature compensation, R. 512
Standard thermal mercury volt-meter, R. - - - - - - 68
Stannous iodid, solubility of, R. - - - - - - 202
Starch, thermodynamics of gelatinization, R. - - - - - 201
State, active, of electrolytic gases, R. - - - - - - 270
— equation of, R. - - - - - - - - 260
Statics, chemical, general problem, P. Duhem, - - - - 1, 91
Stearic, palmitic acids and mixtures, freezing-points of, R. - - 506
Stereochemistry of phenylnitrocinnamic acid, R. - - - - 138
Stereoisomers, equilibria of, Wilder D. Bancroft, - - - 143, 245
Substances, influence of proximity upon volta-electricity, R. - 513
— and mixtures, condensation and critical phenomena, R. - - 507
Succinonitril, sodium chlorid and water, equilibrium in the system, R. 264
Sugar, speed of reduction of ferric alum by, R. - - - - 203
Sulfates of neo- and praseodymium, conductivity of, R. - - - 520
— of potassium and sodium, conductivity of, R. - - - 406
Sulfids of iron, resistance and specific heats, R. - - - 60
— metallic formation by mechanical influences, R. - - - 402
Sulfonic acids of toluene and xylene, energy of, R. - - - 406
Sulfur, chemical decomposition of, R. - - - - - 140
— molecular weight, Samuel D. Gloss, - - - - 421
— solutions in carbon bisulfid, specific gravity of, R. - - 398
— spectrum of, R. - - - - - - - - 271
Sulfuric acid, dilute freezing-points of, R. - - - - - - 262
— and ethyl alcohol, equilibrium between, R. - - 64
Supercooled benzophenon, crystallization of, R. - - - - 448
— liquids, number of nuclei in, R. - - - - - 448
— liquids, solubility of, R. - - - - - - - 61
Supersaturation and crystalline form, R. - - - - 401
Surface, isothermal pressure, F. G. Donnan, - - - - - 417
— layer, conducting, criterion for coherency, R. - - 524
— of small electrodes, temperature of electrolytes on, R. - - 270
— travel on electrolytes, R. - - - - - - - 407
— van der Waals's for mixtures, R. - - - - - - 201
Surface-tension dilute aqueous solutions, by method of ripples, R. - 524
— of gold, R. - - - - - - - - - 408

Surface-tension by the method of ripples, R. - - - - - 272
— and specific cohesion of freezing gold, R. - - - - 346
— of water, R. - - - - - - - - - 76
Surface-tensions of oxalic, tartaric and citric acids, R. - - - 523
Susceptibility, magnetic, and atomic magnetism, R. - - - - 268
— of water and aqueous solutions, R. - - - - - 514
Synthesis of organic acids, R. - - - - - - - - 72
— of organic substances by electric discharge, R. - - - - 402
System β-naphthol, picric acid and benzene, application of the phase rule, R. - - - - - - - - - 202
— three-component, Hector R. Carveth, - - - - - 209
— three-component with two liquid phases, R. - - - - 264
— water, sodium chlorid, succinonitrile, R. - - - - 264
Systems ether-water and ether-water-malonic acid, equilibrium in, R. 265

Table of atomic weights, R. - - - - - - - - - 504
Tartaric acid, action of caustic alkali solutions on, R. - - - - 508
— citric and oxalic acids, surface-tensions of, R. - - - 523
— racemic and mesotartaric acids, reciprocal transformation, R. 508
Tartrates and glycerates, effect of chloracetyl groups on rotatory power, R. 523
Taste of acids and their dissociation, R. - - - - - 206
— and affinity of acids, R. - - - - - - - - 518
Telephone for determining electrolytic resistances, R. - - - 73
Telluric chlorid and fluorid, action on corresponding acids, R. - - 64
Temperature coefficients of the potential of the calomel electrode, R. 204
— coefficients of potential of calomel electrode with various electrolytes, R. - - - - - - - - 68
— coefficients of salt solutions of alcohol and ether, R. - - - 71
— compensation, self-acting standard cells, apparatus for, R. - 512
— constant, bath, R. - - - - - - - - 137
— constant, device, Hamilton P. Cady, - - - - - 242
— of electrolytes on surface of small electrodes, R. - - 270
— of maximum density for methyl alcohol solutions, R. - - 61
— and migration velocity, R. - - - - - - 141
— and pressure in electrical resistance of solutions, R. - - 405
— and transference numbers of cadmium, R. - - - - 70
— transition, of a solid solution, R. - - - - - - 263
— reductions from platinum to normal air, in low temperature researches, R. - - - - - - - - 519
— variation with, in number of nuclei in supercooled liquid, R. 448
— variations in E. M. F., H-form Clark cell with, R. - - 511
Temperatures 350°–500° air and chemically prepared gases at, R. - 448
— differential method of vapor pressures at various, R. - - 200
— high, effect of light at, R. - - - - - - - 204
— platinum, R. - - - - - - - - - - 519
— various, absorption of gases and liquids, R. - - - - 400
Tension of mercury vapor, R. - - - - - - - - 260
— surface, by the method of ripples, R. - - - - - 272
Tensions, vapor, of aqueous solutions, R. - - - - - - - 262
— vapor, of tensions of transparent efflorescent hydrates, R. - 263
Tetramincobalto carbonate, primary, R. - - - - - - 406
Theories of solution, freezing-points with dilute solutions, R. - - 399
Theory of galvanic polarization, R. - - - - - - - - 343
— of gases, R. - - - - - - - - - 139
— of solubility effects, R. - - - - - - - - 450
— of solutions, R. - - - - - - - - - 341
Thermal conductivity of nitrogen peroxid, R. - - - - - 65
— of nitrogen peroxid, R. - - - - - - - - 398
— constants of the elements, R. - - - - - - 397

Thermal equilibrium in electrolysis, D. Tommasi, - - - 229
— mercury ammeter, R. - - - - - - - 73
Thermochemical theory of the cell with carbon electrodes, R. - 204
Thermochimie, R. - - - - - - - - - 395
Thermodynamics of gelatinization, R. - - - - - - - 201
Thermoelectric properties of liquid metals, R. - - - 205, 513
— pyrometer, Roberts-Austen pyrometer, R. - - - - 513
Thermometer, Paris hydrogen, Rowland's value, mechanical equivalent of heat, R. - - - - - - - - 504
Thermometers, air, harmful space in, R. - - - - - - 395
— instrument for comparison of, R. - - - - - - 505
— Rowland's mercury and Griffiths platinum, comparison of, R. 504
Thermometry, notes on, R. - - - - - - - - - 504
Thermopiles, electrolytic, R. - - - - - - - - - 512
Thin layers, conductivity of liquids in, R. - - - - - - 519
— of explosive gases, inflammability of, R. - - - - 267
Thiourea, conversion into ammonium thiocyanate, J. Waddell, - - 525
Thomson effect in a binary electrolyte, R. - - - - - 513
Three-component system, Hector R. Carveth, - - - - - 209
Three-component system with two liquid phases, R. - - - - 62, 264
Tin and antimony, electrolytic separation of, R. - - - - - 268
Titration, electrometer as indicator, R. - - - - - - 68
— galvanometer as indicator, R. - - - - - - 68
Toluene and water, distribution of mercuric chlorid, Oliver W. Brown, 51
— and xylene sulfonic acid, energy of, R. - - - - - 406
Transference, electrical, of colloids, R. - - - - - - 69
Transference number of hydrogen, Douglas McIntosh, - - - 273
— of hydrogen, note, Wilder D. Bancroft, - - - - 496
— and temperature of cadmium, R. - - - - - - 70
Transference numbers for zinc and cadmium salts, R. - - 516
Transformation and formation of hylotropic isomeric forms of matter, R. 397
— racemic, of ammonium bimalate, R. - - - - - 402
— reciprocal, of optical antipodes, R. - - - - - 345
— reciprocal, tartaric, racemic and mesotartaric acids, R. - - 508
— of zinc sulfate in Clark element, R. - - - - 267
Transition temperature of a solid solution, R. - - - - - 263
Transparent, efflorescent, hydrates, vapor tensions of, - - - 263
Travel, surface, on electrolytes, R. - - - - - - - 407
Tri-ionic salts, solubility effect, R. - - - - - - 450
Tungsten, atomic mass, R. - - - - - - - - 137

Ultraviolet spark spectra of the elements, R. - - - - - 207
Unit of electrical resistance, Imperial Institute, Charlottenberg, R. - 405

Valency of beryllium, R. - - - - - - - - 400
Vapor densities at extreme degrees of heat, R. - - - - 341
— density of dry ammonium chlorid, Baker's research on, R. - 511
— mercury, tension of, R. - - - - - - - 260
Vapor pressure differences, differential method, R. - - - 200
— of films, R. - - - - - - - - - 524
— and osmotic pressure of solutions, R. - - - - - 203
Vapor pressures of mutually soluble liquids, R. - - - - - 200
— tension of concentrated hydrochloric acid solutions, F. B. Allan, 120
— tensions of aqueous solutions, R. - - - - - - 262
— tensions of transparent efflorescent hydrates, R. - - 263
— volume from cubic centimeter of liquid at boiling-point, R. - 138
Vapors and gases, catalytic action on the oxidation of phosphorus, R. 523
Variance of the voltaic cell, Wilder D. Bancroft, - - - - - 427
Variation of number of nuclei in supercooled liquids, R. - - 448
— with pressure of molecular velocity of liquids, R. - - 395
Variations in E. M. F. of H-form Clark cell, with temperature, R. - 511

Velocities of reactions, influence of side chains on, R. - - - 342
Velocity of crystallization, R. - - - - - - - 450
— of hydrolytic decomposition of carbonylsulfid, R. - - 203
— of migration, temperature influence, R. - - - 141
— molecular of liquids, R. - - - - - - 395
— molecular of liquids, and its variation with pressure, R. - 504
— of reacting chlorin molecules, R. - - - - 58
Vibrations, electric and magnetic in Hertz's waves, R. - - 271
Viscosity of non-conducting liquids in constant electrical field, R. - 76
Volatility of fluorin compounds, R. - - - - - 140
Volta-electricity, influence of proximity of substances upon, R. - - 513
Voltaic cell, variance, Wilder D. Bancroft, - - - - 427
Voltameter in measurement of electrolytic separation of metals, R. - 71
Volt-meter, standard thermal mercury, R. - - - - 68
Volume of vapor from cubic centimeter of liquid at boiling-point, R. - 138
Volumes, molecular, of liquids, R. - - - - - 59
— molecular, of liquids, laws respecting, R. - - - - 398
Van der Waals's surface for mixtures, R. - - - - 201

Walls, semipermeable, nature of, R. - - - - - 509
Water, alcohol and potassium nitrate, Norman Dodge and L. C. Graton. 498
— and aqueous solutions, susceptibility of, R. - - - 514
— benzene, and acetic acid, John Waddell, - - - - 233
— and carbon dioxid, absorption and emission, R. - - 407
Water of crystallization, theory of, R. - - - - - 401
Water-ether, equilibrium in system, R. - - - - 265
Water-ether-malonic acid, equilibrium in system, R. - - - 265
Water in formic acid, specific electric conductivities and freezing-points, R. 521
— sodium chlorid, and succinonitril, equilibrium in system, R. - 264
— solubility of ammonia below 0°, R. - - - - 140
— solubility of stannous iodid in, R. - - - - - - 202
— surface-tension of, R. - - - - - - 76
— surface-tension by method of ripples, R. - - - - 272
Waves, electric, absorption in electrolytes, R. - - - 271
— Hertz's electric and magnetic, vibrations in, R. - - - 271
— refractive indices for short electric, R. - - - 207
Weight, atomic, of aluminum, R. - - - - - - - 396
— of cobalt, R. - - - - - - - - 396
— of contained metals and crystallographic character of salts, R. - 346
— of nickel, R. - - - - - - - 396
Weight, change in chemical reactions, R. - - - - - 137
Weights, atomic, table of, R. - - - - - - 504
— molecular, by the boiling-point method, R. - - - 400
— of carbon compounds, R. - - - - - 507
— of liquids, Clarence L. Speyers, - - - - 347, 362
— modification of Landsberger's boiling-point method, R. - 507
— of solids, R. - - - - - - - - 398

X-rays, action on electrified bodies, R. - - - - - 208
Xylene and toluene sulfonic acids, energy of, R. - - - - 406

Zeeman's phenomenon, R. - - - - - - - 75
Zinc and cadmium, electrolytic separation, R. - - - - 268
— and cadmium, latent heats of evaporation, R. - - 506
— and cadmium salts, transference numbers, R. - - - 516
— and cobalt, electrolytic separation, R. - - - - 268
— from copper, technical electrolytic separation, R. - - - 269
— gold, and electrolysis, R. - - - - - 142
— hydroxid in precipitation, R. - - - - - 202
— rates of solution in dilute acids, R. - - - - 343
— sulfate, transformation in Clark element, R. - - - 267